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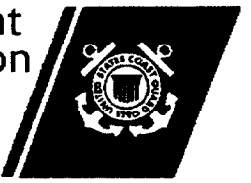

Operational Logistics Support Plan (OLSP) for the Marine Protector Class 87' WPB

COMDTINST M4081.9

U.S. Department of Transportation
United States Coast Guard

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COMMANDANT INSTRUCTION M4081.9

Subj: OPERATIONAL LOGISTICS SUPPORT PLAN (OLSP) FOR THE MARINE PROTECTOR CLASS 87' WPB

1. **PURPOSE**. This Manual describes how the 87' WPB will be logistically supported during their operational lifetime. Logistics support responsibilities of the various support organizations and the relating support policies are consolidated in this Manual.

2. **ACTION**. Area and district commanders, commanders of maintenance and logistics commands, commanding officers of headquarters units, assistant commandants for directorates, Chief Counsel, and special staff offices at Headquarters shall comply with the requirements of the OLSP.

3. **DIRECTIVES AFFECTED**. None.

4. **CHANGES**. Recommendations for changes are requested from all users of this Manual.

5. **FORMS/REPORTS**. None.

T. L. TERRIBERRY
Acting Chief of Staff

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CHAPTER 1. INTRODUCTION

A. **General**. The 87' Coastal Patrol Boat (CPB) project is a major acquisition construction project to replace the aging fleet of 82' Point Class WPBs. Several Coast Guard Coastal Patrol Boats (CPB) have been delivered to the Coast Guard and are now in active service. This document describes the logistics support concepts, organization and facilities in place or planned to provide operational logistics support for these patrol boats.

B. **Revisions**. Operational commanders and support managers shall forward all suggested OLSP changes/revisions to Commandant (G-OCU) for review and approval. This OLSP will be updated periodically or at least every three years in accordance with the Operational Logistics Support Plan (OLSP) Development and Management Responsibility, HQINST 4081.2.

C. **Mission Requirements**. Mission requirements and operating characteristics are outlined in the Operational Requirements Document (ORD).

D. **Mission Areas**. The primary missions for these patrol boats are Enforcement of Laws and Treaties (ELT) and Search and Rescue (SAR). Secondary missions include Port Safety and Security (PSS), Marine Environmental Response (MER) and Recreational Boating Safety (RBS).

E. **Operations Concept**.

1. **Deployment**. The Marine Protector Class fleet consists of the lead CPB Hull 87301 (USCGC BARRACUDA) and other patrol boats to be built (See Table 1-1).

2. **Mission Employment**. 87' WPBs will be deployed as independent patrol boats and will operate in accordance with COMDTINST 3100.5 (series), Cutter Employment Standards. Projected employment of these patrol boats includes provisions for diverting out to 200 miles or more for specific missions. 87' WPBs may be assigned public affairs, marine environmental protection, or commercial vessel safety tasks, as required.

3. **Operational Environment**. The CPB shall typically conduct coastal patrols out to 50 miles offshore and sortie from assigned coastlines to encompass the Maritime Defense Zone and Exclusive Economic Zone. It will perform all primary missions in conditions through Sea State Five and

small boat operations through Sea State Four. The CPB will interdict, board and seize various vessels. 87' CPBs may be located in all coastal districts of the Coast Guard.

4. **System/Service Life Cycle**. The designed expected system life for the cutter is twenty-five years. The cutter's service cycle, per the Naval Engineering Manual, COMDTINST M9000.6 (series), will consist of alternating periods of underway and maintenance status. A single service cycle will extend over three years with dry-docking availability's occurring every third year (e.g., dry-dock, dockside, dockside).

TABLE 1-1

CPB HOMEPORT LISTING

(Homeporting listed here subject to change)

Hull Number and Cutter Name	Delivery Date	OPFAC		Existing 82 and
		District	Hull Designation	New CPB Homeport
87301-USCGC BARRACUDA	9-Apr-98	11	13301	Eureka, CA
87302-USCGC HAMMERHEAD	29-Jul-98	01	13302	Woodshole, MA
87303-USCGC MAKO	9-Sep-98	05	13303	Cape May, NJ
87304-USCGC MARLIN	2-Dec-98	07	13304	Fort Myers, FL
87305-USCGC STINGRAY	13-Jan-99	08	13305	Mobile, AL
87306-USCGC DORADO	24 Feb 99	11	13306	Crescent City, CA
87307-USCGC OSPREY	7-Apr-99	13	13307	Port Townsend, WA
87308-USCGC CHINOOK	19 May 99	01	13308	New London, CT
87309-USCGC ALBACORE	30 Jun 99	05	13309	Little Creek, VA
87310-USCGC TARPON	28 Jul 99	07	13310	Tybee Island, GA
87311-USCGC COBIA	25-Aug-99	08	13311	Mobile, AL
87312-USCGC HAWKSBILL	22-Sep-99	11	13312	Monterey, CA
87313-USCGC CORMORANT	20-Oct-99	07	13313	Fort Pierce, FL
87314-USCGC FINBACK	17-Nov-99	05	13314	Cape May, NJ
87315-USCGC AMBERJACK	15-Dec-99	08	13315	Port Isabel, TX
87316-USCGC KITTIWAKE	12-Jan-00	14	13316	Nawiliwili, HI
87317-USCGC BLACKFIN	9-Feb-00	11	13317	Santa Barbara, CA
87318-USCGC BLUEFIN	8-Mar-00	07	13318	Fort Pierce, FL
87319-USCGC YELLOWFIN	5-Apr-00	07	13319	Charleston, SC
87320-USCGC MANTA	3-May-00	11	13320	Freeport, TX
87321-USCGC COHO	31-May-00	08	13321	Panama City, FL
87322-USCGC KINGFISHER	28 Jun 00	07	13322	Mayport, FL
87323-USCGC SEAHAWK	26-Jul-00	08	13323	Apalachicola, FL
87324-USCGC STEELHEAD	23-Aug-00	08	13324	Port Aransas, TX
87325-USCGC BELUGA	20-Sep-00	05	13325	Portsmouth, VA
87326-USCGC BLACKTIP	18-Oct-00	11	13326	Oxnard, CA
87327-USCGC RAZORBILL	15-Nov-00	08	13327	Morgan City, LA
87328-USCGC RIDLEY	13-Dec-00	01	13328	Montauk, NY
87329-USCGC COCHITO	10-Jan-01	05	13329	Little Creek, VA
87330-USCGC MANOWAR	7-Feb-01	08	13330	Galveston, TX
87331-USCGC MORAY	7-Mar-01	01	13331	Jonesport, ME
87332-USCGC PELICAN	4-Apr-01	08	13332	Gulfport, MS
87333-USCGC ADELIE	2-May-01	13	13333	Port Angeles. WA
87334-USCGC GANNET	30-May-01	07	13334	Cape Canaveral , FL
87335-USCGC NARWHAL	27-Jun-01	08	13335	Corpus Christi, TX
87336-USCGC STURGEON	25-Jul-01	11	13336	Newport Beach, CA
87337-USCGC SOCKEYE	22-Aug-01	08	13337	Grande Isle, LA
87338-USCGC IIBIS	19-Sep-01	11	13338	Bodega Bay, CA
87339-USCGC POMPANO	17-Oct-01	05	13339	Cape May, NJ
87340-USCGC HALIBUT	14-Nov-01	08	13340	Gulfport, MS
87341-USCGC BONITO	12-Dec-01	11	13341	Marina Del Rey, CA
87342-USCGC SHRIKE	9-Jan-02	08	13342	Pensacola, FL
87343-USCGC TERN	6-Feb-02	11	13343	San Francisco, CA
87344-USCGC HERON	6-Mar-02	08	13344	Sabine, TX
87345-USCGC WAHOO	3-Apr-02	05	13345	Cape May, NJ
87346-USCGC FLYINGFISH	1-May-02	01	13346	Newport , RI
87347-USCGC HADDOCK	29-May-02	11	13347	San Diego, CA
87348-USCGC BRANT	26-Jun-02	11	13348	Half Moon Bay, CA
87349-USCGC SHEARWATER	24-Jul-02	13	13349	Port Angeles, WA
87350-USCGC PETREL	21-Aug-02	05	13350	Little Creek, VA

CHAPTER 2. SYSTEM DESCRIPTION AND CONCEPTS

A. **General**.

1. **System Operating Components**. The CPBs themselves and all operating and support equipment included onboard are the system operating components. Some of these components are: AN/SPS-73 Surface Search Radar (SSR), Electronic Charting and Display Information System (ECDIS), MTU Propulsion Engines, Electromagnetic Speed Log, and Automatic Direction Finder (ADF) to name a few.

2. **System Logistics Components**. The systems logistics component consists of the existing shore side support establishment. For any new or specialized systems, equipment, or technology, which may be added to these cutters, the required logistics support resources will be integrated into the existing support establishment.

B. **System Description**. The major operating and design features of the 87' WPBs are:

CHARACTERISTIC	Dimension/features
Length	26.5 Meters (86'11")
Draft, maximum	1.74 Meters (5'10")
Beam, maximum	5.92 Meters (19'4")
Freeboard	1.60 Meters (5'5")
Height, max. from W/L	15.24 Meters (50')
Displacement	91 Metric tons (89.85 LT)
Turning Radius	2.5 time LOA
Wind Presentation	85.4 sq. meters (918 sq. ft.)
Speed	In excess of 25 Knots Max Continuous Speed
Endurance	Capable of patrolling unsupported for three days, including two days at best economical speed on two shafts, one day at maximum continuous speed; frozen, refrigerated, and dry food storage spaces; water desalinization capability.
Damage Control	Two compartment Subdivision

Habitability	Full Climate Control meets Coast Guard standard for noise, heat and vibration.
Armament	Small arms and machine guns
Boarding	5.6M AMBAR Rigid Inflatable Boat (RIB) powered by YANMAR inboard diesel engine. One person operated Stern launch and recovery system capable of RIB operations in Sea State 4.
Accommodations (11) 10 crew (normal) 1 spare rack	One three person, and four two person staterooms to accommodate mixed gender crews.

C. **Major Assemblies/Subassemblies**. Major assemblies and subassemblies are identified in the CPB Maintenance Support Outline (MSO), Enclosure (1).

D. **Logistics Support Concepts**.

1. **Objectives**. The primary logistics support objective is to ensure that the required logistics support is in place when and where needed during the service life of the CPB. Minimization of life cycle costs is also a major objective.

2. **Support Environment**. Existing Coast Guard logistics support organizations, procedures and facilities will be used to support the CPBs.

3. **Logistics Support Improvements**. Spare parts, allowance documents, technical manuals on Compact diskette (CD), and repair specifications will be in place at each maintenance level by the Coast Guard Support Date (CGSD). The CGSD occurs one year after the delivery date of each CPB. In addition to this, a Central Engine Overhaul (CEO) Program will be established for the support of the propulsion engines on the CPB. This program will be administered by the Engineering Logistics Center (ELC) with top end overhauls of the CPB engines occurring approximately every 7,000 hours and major overhauls every 14,000 hours.

CHAPTER 3. ORGANIZATION AND RESPONSIBILITIES

A. **General**. Responsibility for planning and providing logistics support for the 87' CPBs is widely distributed within Coast Guard Headquarters and field organizations. Adequate logistics support can be provided only if support problems are identified and brought to the attention of the proper support organization. Commanding Officers (COs) and Officers in Charge (OICs) are in the best position to evaluate the support they receive. They have primary responsibility for identifying support deficiencies and reporting them to the proper organizational level. Logistics support elements applicable to the CPB Project are outlined in the following paragraphs.

B. **Logistics Support Organization and Responsibilities**. Support planning and execution responsibilities are described as follows:

1. **Commanding Officer/Officer in Charge shall:**

   a. Operate the CPBs within the operational and environmental conditions described in the Operational Requirements Document (ORD).

   b. Report casualties via the Consolidated Casualty Reporting System (CASREP) to the proper operational and support organizations.

   c. Identify logistics support problems and bring them to the attention of the chain of command.

   d. Conduct maintenance, supply support, training, other logistics activities, and configuration management according to this plan and other appropriate directives.

   e. Provide documentation to the appropriate Maintenance Logistics Command (MLC) on Current Ship Maintenance Projects (CSMPs).

   f. Maintain configuration control of the cutter.

2. **Group Commanders shall:**

   a. Provide direct maintenance and supply support to patrol boats according to this plan and local instructions. In particular, assist CPBs in performing organizational and intermediate level maintenance.

   b. Provide shore facilities, including space for parts storage, special tools and test equipment, personnel administrative services, and other logistics support according to this plan.

   c. Schedule operations and maintenance periods according to this plan. Ensure 87' CPBs are operated within the assumed environmental conditions and operating/maintenance cycle described herein. Report deviations from this plan to the proper support organization.

   d. Monitor CASREP messages and respond to deficiencies as appropriate.

3. **Industrial Support Center Commanding Officers shall:** Provide direct support to the CPBs and their shore facilities as directed by MLCs and Chapter 4 of this plan.

4. **Commanding Officers of Naval Engineering Support Units (NESUs)/Civil Engineering Units (CEUs) shall:** Provide direct support to patrol boats and their shore facilities as directed by the MLCs and Chapter 4 of this Plan.

5. **Supervisor of the Electronic Support Detachments (ESDs) will:**

   a. Provide primary support for the Cutter's electronic communications, navigation, and Coast Guard Standard Workstation systems. As defined in Paragraph 4.B.2 of this document, and Electronics Manual, COMDTINST M10550 (series).

   b. In coordination with the Cutter CO/OIC, schedule and perform all organizational level planned maintenance in accordance with the Coast Guard Planned Maintenance System (CGPMS) Work Schedule Book.

   c. In accordance with appropriate SOP/Instructions maintain the required response capability for equipment

casualties. Perform all organizational level corrective maintenance. Coordinate with the Electronic Support Unit (ESU) technical assistance outside of the capability of the ESD.

d. Budget and manage AFC-30 funds provided for both planned and corrective maintenance.

e. Maintain and update the Management Information for Configuration Allowances (MICA) spare parts inventory.

f. Maintain the Electronic Installation Record (EIR) and the CGPMS Work Schedule Book.

6. **Commanding Officer Electronic Support Units (ESUs) shall:**

a. Provide intermediate level corrective maintenance support using intrinsic expertise or outside technical experts.

b. Budget and manage AFC-42 funds provided for the CPB.

c. Provide input via the MLC to the ShipAlt process. Manage approved alterations of electronic equipment/installations.

7. **District Commanders shall:**

a. Supervise the support efforts and the operational/maintenance schedules of the Groups, and coordinate with Area.

b. Budget and manage Accounting Fund Code-30 (AFC-30) operating and maintenance funds for the patrol boats and their shore facilities.

c. Assist patrol boats in obtaining support and resolving support problems.

d. Coordinate ship repair worklists with cognizant MLC. Provide small arms and ammunition support as directed by Commandant (G-OPD).

e. Monitor CASREP messages and respond to deficiencies as appropriate.

8. **Commanders of Maintenance and Logistics Commands shall:**

a. Supervise support centers, manage the repair, alteration, maintenance and outfitting of the shore structures supporting the patrol boats. Plan and manage AFC-43 and AC&I funds.

b. Manage the repair, maintenance and approved alterations of electronics equipment installed in the patrol boats. Budget and manage AFC-42 funds associated with this. Supervise Electronics Support Detachments (ESDs)/Electronic Support Units (ESUs). Administer electronics equipment repair contracts.

c. Supervise the Naval Engineering Support Units (NESUs) which will manage the repair, maintenance and alteration program for the patrol boats. Budget and manage AFC-45 funds. Plan, initiate and execute ship repair contracts for the patrol boats.

d. Ensure that safety and environmental health hazards are identified for abatement through the ship, repair, maintenance, and alteration program.

e. Maintain configuration control of the cutter.

9. **Area Commanders shall**: Monitor and evaluate Area, MLC, and District management processes and take steps to remedy problems associated with the organizational and functional alignments, work procedures, manpower utilization and delegation of authority. Review District and MLC Planning, Programming, Budgeting and Evaluation System (PPBES) inputs.

10. **Commanding Officer of the Engineering Logistics Center (ELC) shall**:

a. Perform supply support activities for HM&E (Hull, Mechanical and Electrical) equipment, all electronics equipment, damage control and ordnance equipment including provisioning, allowance development, and system stock procurement. Manage insurance spares, technical data, cataloging, inter-service supply support efforts, inventory management and Management Information for Configuration and Allowance (MICA) development and distribution.

b. Function as the maintenance manager for Navy owned weapons systems .50 caliber and above. Receive and

manage funds for ordnance alterations (OrdAlts) for these systems.

c. Provide related guidance, standards and specific policies to MLCs for maintenance, accountability, disposal and updating of existing installed Navy owned weapons systems.

d. Maintain Coast Guard Planned Maintenance System (CGPMS) for Hull, Mechanical and Electrical (HM&E) equipment.

11. **Commandant (G-SEN) will:**

a. Approve fleet-wide standards and instructions for specific maintenance policy of HM&E and ordnance equipment installed on the 87' WPBs. Provide related guidance, standards and specific policies for the Maintenance and Logistics Commands (MLCs).

b. Approve all alterations for HM&E, Electronics and Ordnance Systems.

c. Provide damage control instructions.

d. Provide technical guidance for the training of personnel in the Electrician Mate, Machinery Technician, and Damage Controlman rates.

e. Develop and be responsible for maintaining and amending the HM&E Maintenance Support Outline (MSO).

12. **Commandant (G-SLP) will:**

a. Establish and review logistics and configuration management policy for the patrol boats.

b. Provide logistics and configuration management policy guidance to the Engineering Logistics Center (ELC).

13. **Commandant (G-SCE) will:**

a. Provide related guidance, standards and specific policies for the Maintenance and Logistics Commands (MLCs).

b. Provide technical guidance for the training program for Electronics Technicians.

c. Develop the Electronics Maintenance Support Outline (MSO) and be responsible for maintaining and amending it. Review and approve plans for renovation, replacement or alteration of electronic systems. Forward to ELC or Commandant (G-SEN) as required for approval.

d. In accordance with the Electronics Manual, COMDTINST M10550 (series), designate System Management Engineering Facilities (SMEFs) for all electronic equipment as required.

e. Maintain Coast Guard Planned Maintenance System (CGPMS) for electronic equipment.

14. **Commandant (G-OPD) will:**

a. Prepare, review and approve fleet-wide standards and instructions for general weapons system maintenance policy, employment doctrine/policy, ordnance publication requirements, small arms, ammunition and ordnance training. Liaison with the Navy for procurement of larger caliber ammunition, establish allowances for ammunition and small arms and arrange for training for installed systems. Conduct Planning, Programming, Budgeting and Evaluation System (PPBES) activities for the combat systems and ordnance equipment installed in the patrol boats.

b. Provide technical guidance for the training program for Gunner's Mates.

15. **Commandant (G-OPF) will:** Ensure vessel registered in the Consolidated Casualty Reporting System (CASREP).

16. **Commandant (G-OCU) will:**

a. Be the Configuration Manager for the patrol boats.

b. As Facility Manager, develop, coordinate, administer, review and evaluate plans, policies, procedures and performance standards for the patrol boats. Manage and be responsible for the maintenance of this plan.

c. Conduct the Planning, Programming, Budgeting and Evaluation System (PPBES) activities for the patrol boats.

17. **Commandant (G-O) will:**

a. As Program director, have ultimate responsibility for the operational and military readiness of the patrol boats.

b. Determine basic plans, systems, methods and procedures, by which the patrol boats maintain operational and military readiness.

18. **Commandant (G-W) will:** Provide personnel and training to properly staff the patrol boats and their supporting organizations.

CHAPTER 4. MAINTENANCE SUPPORT

A. **Concept**. The objective of the Maintenance Concept is to establish criteria for design considerations that affect readiness, reliability, maintainability, and supportability. Maintenance support begins with development of the system maintenance concept, continues through logistics support analyses and procurement of maintenance support material, and ends with an ongoing system/product maintenance support capability that will sustain system operations through normal maintenance actions and casualty reports (CASREPS). This section describes the maintenance needs of the Coastal Patrol Boat (CPB) at the organizational (O), intermediate (I), and depot (D) maintenance levels. The objective is to keep the cutter and its equipment ready to perform its stated mission.

B. **Equipment Categories**. For maintenance purposes, equipment is divided into three broad categories, Hull, Mechanical, and Electrical (HM&E); Electronics; and Ordnance.

1. **Hull, Mechanical, and Electrical (HM&E)**. Maintenance policy for HM&E equipment is promulgated by Commandant (G-SEN) in the Naval Engineering Manual, COMDTINST M9000.6 (series) and the Maintenance Support Outline for providing guidance for the Integrated Logistics Support efforts and document support responsibilities. HM&E consists of equipment (e.g., propulsion engines, generators, etc.) required to operate the major system. This also includes Damage Control equipment.

2. **Electronics**. Electronic equipment is that principally containing circuits regulating conduction through devices such as tubes, transistors, and integrated circuits. For purposes of Integrated Logistics Support (ILS) planning, "electronics" refers to electronic equipment used for radio navigation, depth sounding, IFF, interior and exterior communications, including cryptography, CCTV, radar, command and control (C2), and electronic charting. Electronics also refers to computer systems integral to the performance of these functions, such as the computers in an Electronic Chart Display and Information System (ECDIS) or communication system. For ILS planning, the term "electronics" generally does not refer to equipment used in propulsion and steering control systems, electrical power generation and distribution systems, gyrocompasses, speed logs, ordnance and fire control

systems, control systems for HVAC systems, and other systems with primarily mechanical functions. This equipment is classified as HM&E electronics. In addition, electronics does not generally refer to aviation specific equipment. (See Chapter 6 of Electronics Manual, COMDINST M10550.25 (series) for further details and examples.) The Maintenance and Support Outline (MSO), Cutter Class Maintenance Plan (CCMP), or Boat Class Maintenance Plan (BCMP) delineates which category specific items of equipment fall in. Electronics equipment is that principally containing circuits regulating all equipment that requires integrated circuits (e.g., radar, VHF/UHF radios, Engine consoles, etc.). Maintenance policy for electronic equipment is promulgated by Commandant (G-SCE) in the Electronics Manual, COMDTINST M10550.25 (series).

Major electronic systems on the Coastal Patrol Boat include:

a. Communications:

Motorola Spectra W9 VHF-FM Radio w/antenna.
Ross-DSC-500 VHF-FM Radio w/antenna
CDIE-RT-2400A HF Transceiver w/coupler and antenna.
United Marine UM-ICSC-1338 Integrated Communications System AN/WSC-3 UHF Radio w/antenna
Cryptographic equipment
CDQC-SR-501 2182 Guard receiver
CEUF-FAX-207 Weather Fax, w/CEUF-FAX-5 antenna/coupler

b. Navigation:

CRP-NAV-398 GPS w/CRP-RAYSTAR-108 antenna.
CRP-V850 Depth Sounder
AN/SPS-73(V)11 RADAR System.
5X579-TC-5025A-M Automatic Direction Finder w/antenna
NAVI Sailor 2400 ECDIS system

c. Computer System:

Coast Guard Standard Workstation III

3. **Ordnance**. Ordnance materiel consists of all small arms (e.g., pistols, shotguns) and machine guns (.50 Cal. or higher).

C. **Types of Maintenance**. Maintenance is divided into two types:

1. **Planned Established Maintenance.**

a. **Preventive Maintenance.** Maintenance, which is routinely and systematically, scheduled for the purpose of preventing equipment and system failures that will diminish the operation and safety of the cutter. Each maintenance requirement of this type will be defined in the Planned Maintenance System (PMS) promulgated by Commandant (G-SEN) and (G-SCE). Requirements for HM&E organizational level preventive maintenance are contained in the Maintenance Support Outline, enclosure (1). Commanding Officers and/ or OICs are responsible for the scheduling, funding, and accomplishment of all maintenance described in these publications. However, it is expected that the patrol boat crews can accomplish 100% of the required preventive maintenance. Assistance for performing the balance of preventive maintenance not performed by patrol boat crews will be provided by bases, groups, or commercial contractors and other government agency facilities.

(1) Commandant (G-SEN) and (G-SCE) have developed the Coast Guard Planned Maintenance System (CGPMS) for HM&E and Electronics equipment. CGPMS has been developed to provide a standardized planned maintenance system for all CPB HM&E and electronic equipment within the Coast Guard. It provides the necessary tools to plan, schedule, and perform effective planned maintenance.

(2) CGPMS procedures shall take precedence over all other forms of planned maintenance, including Navy and other locally developed procedures. Other forms of the planned maintenance system (PMS) are not authorized if CGPMS is available. Where CGPMS is not available, then Navy or locally developed PMS procedures are authorized. Requests for any deviation from the above procedure should be forwarded to Commandant (G-SEN) and (G-SCE) via the cognizant MLC. Electronics preventive maintenance shall be accomplished according to the Electronics Manual, COMDINST M10550.25 (series), Chapter 10.

b. **Facility Maintenance.** Facilities maintenance includes actions such as routine cleaning and painting, which preserve the hull, superstructure, fittings, and protective and decorative coatings. Except for preservation of the underwater body, which is accomplished as depot level preventive maintenance by the MLC, Commanding Officers and OICs are responsible for the scheduling, funding and accomplishment of all HM&E facility maintenance. The Coating and Color Manual, COMDTINST M10360.3(series), contains information on the proper preservation of coating systems.

c. **Corrective Maintenance.** Corrective maintenance is random in both time and severity. The amount and severity of any corrective maintenance required is considerably moderated by preventive maintenance in two ways: proper operation, lubrication, and cleaning which tends to prevent catastrophic failures; and scheduled inspections which allow detection of incipient failures. HM&E corrective maintenance is accomplished at three levels, organizational, intermediate, and depot. Routine corrective maintenance is funded by AFC-30 regardless of the level at which it is performed. Major corrective maintenance (e.g., groundings, fires, and main engine/reduction gear casualties beyond the funding capabilities of the unit and Group) will be funded by AFC-45 and accomplished by the MLC. Per MLC published guidelines:

(1) The patrol boat crew's ability to accomplish corrective maintenance is affected by the assigned skill levels, training, equipment complexity, availability of replacement parts and tools. In general, crews are expected to troubleshoot equipment casualties, isolate the cause of casualties to the lowest replacement part, replace certain parts, and perform minor repairs to installed equipment. More complex part replacement and repairs will be accomplished at the intermediate or depot levels. While it is impossible to detail all of the capabilities here, the Maintenance Support Outline, provided as enclosure (1), provides a broad outline of how corrective maintenance will be accomplished. The Source, Maintenance and

Recoverability (SM&R) Codes, contained in the Management Information for Configuration and Allowances (MICA), provide detailed information for each piece of installed HM&E equipment.

(2) Most HM&E corrective maintenance beyond the capabilities of the patrol boat crews will be accomplished at the intermediate level. Corrective maintenance that is considered beyond the capability of the intermediate level facilities will be accomplished by depot level facilities. See enclosure (1) and the MICA for more details.

(3) Electronic corrective maintenance is defined in the MSO. This document, which will be issued to all 87' WPBs, provides a broad outline of how corrective electronics maintenance will be accomplished. Additionally, enclosure (4) provides is a listing of Coast Guard support facilities that will perform 87' WPB electronics maintenance.

2. **Contract Maintenance**. Each CPB will be delivered to the Coast Guard with a one-year warranty on all systems and equipment. Bollinger Shipyards, Incorporated (BSI) located in Lockport, LA, the CPB prime contractor, is responsible for providing all provisions of the warranty to the Coast Guard. A CPB Warranty Plan was developed and provided to units at delivery which provides specific guidance dealing with warranty related issues. The Warranty Plan is administered by the CPB Project Resident Office (PRO) and monitored by the Headquarters Project Staff.

D. **Maintenance Levels**. Maintenance is accomplished at three support levels, and is the responsibility of the Station, Group, or MLC.

1. **Organizational Level**. The patrol boat crew, or operational unit, will perform Organizational (O) level maintenance (inspecting, servicing, lubricating, and adjusting) on all installed equipment, including all preventive maintenance. Major equipment removals, renovations, and alterations shall not be performed by the assigned crew. All electronic organizational level maintenance will be done by the responsible ESD.

2. **Intermediate Level**. Group overhaul and repair of CPB components will usually consist of component exchange with

a government agency or commercial distributor. CPB Group Commanders may request that specific intermediate maintenance requirements be performed by the Coast Guard, U.S. Navy, Other Government Agency (OGA), or a civilian contractor. These requirements generally fall into one of the following areas:

a. Industrial activities at CG Bases and Support Centers perform HM&E intermediate, and in some cases, depot level maintenance when tasked.

b. Specific maintenance as authorized will be identified in the Maintenance Support Outline (MSO), enclosure (1). MSO associated maintenance is generally performed by a contractor under an MLC or Headquarters administered contract.

c. Other electronic intermediate (I) maintenance level sources include Electronics Support Units (ESUs) and SMEFs.

3. **Depot Level Maintenance**. Depot level maintenance will be limited to those items beyond the capability of the crew or intermediate (I) level facilities. HM&E depot level maintenance includes AFC-30 and AFC-45 funded maintenance, overhauls, repairs, and alterations that are the responsibility of, and performed under the direction of Groups, Bases, MLCs and the ELC. Electronic depot level maintenance is performed under the direction of the ESU, MLC or ELC and is funded by AFC-30 and AFC-42 funds.

   Requirements for HM&E depot level preventive maintenance are contained in the Naval engineering Manual. This includes primarily, dry-docking with related maintenance action on the underwater body and fittings, MTU main engine 7,000-hour top end overhaul and 14,000 hour complete overhaul. Depot level HM&E preventive maintenance will be scheduled by the appropriate MLC and funded by AFC-45 funds. A Central Engine Overhaul (CEO) program will be established and administered by the Engineering Logistics Center (ELC).

4. **Ordnance Maintenance**. Ordnance maintenance will be accomplished in accordance with Chapter 4, of the Ordnance Manual, COMDTINST M8000.2 (series). All Coastal Patrol Boats have navy owned weapon systems installed and shall adhere to the requirements and procedures for planned maintenance (PMS) as outlined in the Ship's Maintenance and Material Management (3-M) Manual, OPNAVINST 4790.4

(series) and as described in Chapter 4 of the Ordnance Manual, COMDTINST M8000.2 (series). Proper planned maintenance documentation for Navy-owned ordnance is obtained by submitting an OPNAV Form 4790/7B when equipment configuration changes occur. However, in the event that proper PMS documentation is not on board, arrange through the appropriate MLC (vr) to obtain the correct coverage. The Ordnance COSAL supports ordnance material.

5. **Main Engine Overhaul**. The MLCs will be responsible for scheduling and completion of MTU engines top end overhauls at 7,000 hours and complete overhauls at 14,000 hours. These numbers will be revised accordingly as additional maintenance data is obtained on these engines. The MTU engines will be overhauled under a Central Engine Overhaul (CEO) contract funded by AFC-45 and administered by the ELC. AFC-45 funds shall fund the removal and installation of engines.

CHAPTER 5. SUPPLY SUPPORT

A. **General**. The Engineering Logistics Center (ELC) is responsible for effective supply support of the 87' CPBs units and for all aspects of supply management relative to their commodity assignments. Requirements are contained in the Uniform Supply Operations, COMDTINST M4121.2 (series); and Supply Policy and Procedures Manual, COMDTINST M4400.19 (series). The ELC will develop and maintain the Management Information for Configuration and Allowances (MICA) document, which contains the required HM&E and electronic allowances to support the CPBs. Each CPB will utilize existing shoreside storage facilities for the stowage of unit shoreside spares. The ELC and other government stocking points will be queried first (by electronic means) for all equipment and repair parts prior to purchasing locally. All shoreside spares, and system stock is required to be in place prior to the Coast Guard Support Date (CGSD). Material Support Date (MSD) occurs one year prior to the CGSD, which is where the contractor or other government agencies provide support until the Coast Guard is capable of taking over all support responsibilities.

B. **Allowance Document**. Allowance documentation will be provided during delivery of each CPB.

1. **Management Information for Configuration Allowance (MICA)**. The MICA is the standard allowance document which identifies the Hull, Mechanical, and Electrical (HM&E) equipment allowances carried onboard, or stored shore side as insurance allowances to support all CPB cutters for a period of thirty (30) days. Support for electronic spares listed in the MICA will be provided by shore side electronic support activities. Identification of shore side electronics support activities will be provided to the ELC by Commandant (G-SCE). The ELC will provide each shore side support site with MICA information. The ELC will produce and distribute the MICA, and provide the proper configuration information to G-SLS to load spare and repair parts information into the Configuration Management Plus (CMPLUS) program.

2. **Ordnance**. The Consolidated Shipboard Allowance List (COSAL), which is produced and generated by the Navy Ship Parts Control Center, Mechanicsburg, PA, will identify all ordnance items allowed onboard each cutter.

C. **Reparable Management**. Source, Maintenance and Recoverability (SM&R) codes contained in the MICA documentation designate reparable items. SM&R codes specify the disposition of HM&E and Electronic equipment and parts as to where and what repair activity shall receive them for repair and disposition. The ELC will initiate and manage a reparable program in accordance with the Coast Guard Uniform Supply Operations (USO) Manual, COMDTINST 4121.4 (series) and the Defense Regional Interservice Support Regulation (DRIS), DOD 4000.19-R.

D. **Unit Supply Support**. Replenishment of spares, repair parts, support and test equipment is accomplished through ICPs (OGA and CG) and commercial sources as indicated by the source codes listed in the allowance documents (MICA) or by the Source of Supply (SOS) and the Acquisition Advice Code (AAC) listing. The Unit, Group and Area shall adhere to these guidelines to facilitate recording of usage demand history data, reduce excess, and identify obsolete material in the supply system.

E. **Electronic Spares**. Electronic spares for selected systems and equipment will be stored ashore at the Electronic Support Detachment (ESD). Appropriate storage conditions must be maintained in order not to effect the shelf life or operational availability of these parts. The MICA provided by the ELC will provide repair philosophy and allowance parts lists for installed electronics equipment.

F. **Packaging, Handling, Stowage and Transportation (PHS&T)**. Spares or repair parts purchased from the contractor will be preserved, packaged, and packed in accordance with MIL-E-17555H, "Level A Packaging and Packing". Packaging, Handling, Storage and Transportation (PHS&T) of ICP controlled material will be accomplished in accordance with the Supply Policy and Procedures Manual (SPPM), COMDTINST M4400.19 (series); the Inspection, Packaging, Handling, Storage and Transportation Handbook, COMDTINST M4450.1 (series); and the Property Management Manual (PPM), COMDTINST M4500.5 (series).

G. **Miscellaneous**. The CPB will utilize the Configuration Management PLUS (CMPLUS) database software developed by Commandant (G-SLS) as the primary inventory and maintenance management tool. CMPLUS will manage the parts inventory, track PMS, document the unit's maintenance program and manage unit allowance information (e.g., MICA). **NOTE:** Navy equipment if required will be identified by Commandant (G-OPD)).

CHAPTER 6. LOGISTICS SUPPORT ELEMENTS

A. Manpower and Personnel Support.

1. **General.** The cutter will be crewed with a maximum crew size of ten (10) as prescribed in the Operational Requirements Document (ORD). Installed equipment will permit performance of shipboard evolutions without a constant, live engine room watch. Further, each unit shall be staffed to the level necessary to perform all operational missions, to provide all necessary administrative and personnel support, to perform all training required by current directives, and to perform 100% of organizational (O) level facility, preventive, and corrective maintenance. The regularly assigned crew will carry out all normal boat missions. Routine housekeeping, administrative and personnel support activities will be performed by the ships' crew. The crew will be capable of all routine daily, weekly, monthly and semi-annual PMS (limited to operator level electronics PMS if no electronics technician is assigned). All other PMS shall be accomplished with assistance from individual Stations or Groups.

2. **Personnel Support Level Evaluations.** Operational and support organizational commanders will assess personnel support levels and identify and take action to remedy deficiencies, as described below.

   a. CPB Commanding Officers and OICs shall report their inability to properly accomplish assigned missions and maintenance tasks to their district commanders via the chain of command. Close liaison with group staffs and the MLC organization is essential for proper completion of maintenance.

   b. District Commanders shall ensure that required maintenance days, as specified by paragraph 081.1.2 of the Naval Engineering Manual, COMDTINST M9000.6 (series) are included in operating schedules and that adequate group personnel resources are allocated to support the patrol boats. A balance between operational needs, maintenance needs and maintenance funding is essential.

c. Maintenance and Logistics Commanders shall ensure that appropriate personnel support, services, and AFC-45 maintenance funding is provided to the patrol boats.

d. Commandant (G-OCU), as facility manager, will resolve personnel support level problems through the Planning, Programming, Budgeting and Evaluation System (PPBES) in cooperation with support and program managers.

3. **Billet Structure**. CPB billet structure is listed below. Tour lengths will be in accordance with the Personnel Manual, COMDTINST M1000.6 (series):

CUTTER RANK/RATE	BILLET NUMBER
LTJG/E-9/E-8	CO/OIC
BM1/QM1	XPO
MKC	E-301
MK2	E-201
QM2/BM2	D-101
FS2	D-301
FNMK	E-101
FN	E-302
SN	D-103
SN	D-203

B. **Training and Training Support**.

1. **Concept**. Crews shall be provided the essential job skills necessary to conduct assigned missions, operate and maintain the patrol boats according to this plan, and accomplish assigned administrative support tasks. Training will be accomplished through a combination of resident courses, Personnel Qualification System (PQS), job performance aids and on-the-job training. Resident courses identified in the Master Training List (MTL), enclosure 3, will be provided via Pipeline Training. Major systems training, including engine, electronic vessel/engine controls, and HVAC operations, troubleshooting, and maintenance for initial crews will be provided by the contractor. Training analysis, design, development, implementation and evaluation meets the

requirements contained in Management of the Coast Guards Training System (COMDTINST 1550.9), U.S. Coast Guard Course Design Handbook Standard Curriculum Outline Job Aid (COMDTINST M1550.17).

2. **Requirements/Constraints**. Any individual or team resident training desired by the unit that exceeds the MTL, will take resources away from operational, administrative and maintenance tasks. Therefore, the unit-training plan must be carefully managed and integrated with the operational and maintenance schedules. For training purposes, manufacturer system and component manuals and operator's manuals are provided to the boats prior to delivery.

3. **Formal School Training**. Commandant (G-OCU), in conjunction with Commandant (G-WTT), (G-SRF) and appropriate program and support managers, shall establish training requirements. Commandant (G-OCU) and Commandant (G-WTT) will collate these requirements and maintain the Master Training List (MTL). Planning for training shall follow the guidelines provided in the Training and Education Manual, COMDTINST M1500.10 (series). The administration of the courses designated as pipeline training in the MTL is the responsibility of the Training Quota Management Center (TQC). Training analysis, design, development, implementation and evaluation meets the requirements contained in Management of the Coast Guard's Training System, COMDTINST 1550.9.

   Technical Training Equipment (TTE) and Training Devices (TD) installation will be turnkey at the Reserve Training Center (RTC) facility in Yorktown, VA. Turnkey installations are those which are accomplished by the project office as part of this procurement contract. TTE such as propulsion systems, generators or electronic consoles will be analyzed for human performance improvements and will be ready for the recommended pipeline training for CPB follow-on boat crews. TDs will require special attention because they are unique training items not procured for the fleet. A complete set of training equipment will be installed at RTC around July 1999. General and special purpose test equipment will be procured along with the TTE/TDs equipment buys.

4. **Personnel Qualification Standards (PQS)**. PQS is to be incorporated into the training/qualification program for 87' CPBs. PQS describes the minimum knowledge and skills a trainee must have to correctly perform at a specific

watch station, operate specific equipment, or to perform as a team member. The qualification of maintenance personnel shall be obtained by their attendance at formal school courses and on-the-job training other than PQS. The exception to this is the Division Damage Control Petty Officer and 3M (Maintenance, Material Management System) PQS. The foundation of 87' CPB PQS shall be the U.S. Navy PQS booklets. Table 4-1 of the Cutter Training and Qualifications Manual, COMDTINST M3502.4 (series), lists Navy booklets which have been utilized in developing 87' CPB PQS. USCG unique PQS will be maintained by Commandant (G-OCU) or designated activity. Maintenance responsibility for the PQM modules is still in coordination. The U.S. Navy will maintain standard Navy PQS utilized by the cutter.

In addition, 87' CPB PQM (Personnel Qualification Modules) will be provided to each new vessel. These consist of a CPB Indoctrination Manual, six (6) Learning Reference Guides, Student Activity Guides and a Training Officer Answer Booklet.

5. **Job Qualification Requirements (JQR).** When a watchstation is not covered by PQS, the 87' CPB shall develop JQRs (Job Qualification Requirements) and Student Answer Booklets (SABs) for that watchstation. The Cutter Training and Qualifications Manual, COMDTINST M3502.4 (series), provides guidance on U.S. Navy PQS that shall be used as reference in developing some JQRs.

6. **Familiarization Training.** Each CPB Pre-Commissioning Crew (defined as those who will have at least 1 year and 10 months remaining on their tour) will receive Familiarization Training from the contractor at his facility. This contractor-provided training will consist of propulsion engine, electronic vessel/engine controls, steering, and HVAC operations, troubleshooting, and maintenance training. This training will be provided not less than 1 nor more than 2 months prior to cutter delivery.

7. **Master Training List (MTL).** The Master Training List (Enclosure (3)) provides a complete listing by rating, ranking and specialty of required training authorized for personnel assigned to the CPB cutters. This list is subject to change.

C. **Support and Test Equipment.**

1. **General.** Support and test equipment will be provided to meet maintenance requirements. Special tools and equipment required to support HM&E equipment are listed in the Maintenance Information for Configuration Allowance (MICA) document. Support and Test Equipment needed to maintain the cutters would either be carried aboard or stored ashore. Special tools and test equipment required to support HM&E, damage control and ordnance equipment are listed in the Allowance Equipage List (AEL) portion of the MICA with reference to the appropriate Allowance Parts List (APL).

2. **Requirements/Constraints.** Support and Test Equipment will be provided to meet the maintenance requirements as prescribed by the CPB Class Maintenance Plans, and Planned Maintenance System (PMS). Special tools required to support HM&E items will be listed in the APL. To support electronic items, the MLC will be tasked with determining the exact model types and quantities for the cutter and the support facility. The MLC will procure and distribute all electronic test equipment to applicable support units. The selection of tools and test equipment to be carried aboard will be based on the size and weight of the equipment, the likelihood of its need (i.e., the reliability of the system or equipment it is intended to support), the ability of the crew to use it effectively, the shore-side space available, and the proximity of the shore-side storage to the patrol boat's moorings. Each individual patrol boat together with the appropriate base or group shall determine the storage arrangements and establish procedures for inventory and maintenance of this equipment. The MLC will notify ESUs concerning the availability of required support equipment.

D. **Facilities Support.**

1. **87′ CPB Requirements.** Improvements to existing facilities will be such that these facilities can support both the 110′ WPB and the 87′ CPB. For new facilities, sufficient data relating to existing site characteristics and facilities will be required to assure that sites selected can be developed in a cost effective manner. Table 1-1 lists all of the CPB homeports.

To meet the requirements of the National Environmental Policy Act (NEPA) for the CPB project, the Environmental Impact Analysis (EIA) process was documented and coordinated with the interested public and regulatory agencies through a programmatic Environmental Assessment (EA). The programmatic EA was completed prior to KDP 4 in September 1998, and resulted with a Finding of No Significant Impact to complete the documentation.

a. **Berthing Area Requirements**.

(1) **Depth of water at moorings**: 7'-0" minimum at lowest predicted tide. Whenever possible, provide 9'-0" depth.

(2) **Mooring length**. 100-feet minimum. Whenever possible add 25-feet between cutters and 25-feet at ends of mooring (i.e., mooring length of 137-feet for one (1) CPB; 249 feet for two (2) CPBs).

(3) **Vertical load.** Whenever possible, allow access from AASHTO truck loading HS-20. Heaviest anticipated load is hoist of main diesel engine (approx. 10,000 lbs).

(4) **Horizontal load**. Based on wind presentation area (Chapter 2), and "worst case" docking impact of 5 knots (perpendicular to pier).

b. **Facilities Connections**.

(1) **Electrical**. The 87' CPB is designed for 450 VAC, 3-phase service. If the servicing transformer serves only the shore tie, it should be "tapped-down" as close as possible to 450 volts. If the transformer also serves shoreside loads, 480 volts is acceptable. A separate isolation transformer is not required.

It is desired that 87' CPB and 110' WPB shore ties be identical, to permit accommodation of visiting PBs. Therefore, 200 amp service is required, based on 110' WPB electrical load analysis which calculates 170 amps as maximum shore power load (ref: Bollinger Drawing #110WPB 301-002, Rev A). Note that engineering judgement should be used in sizing "upstream" electrical distribution equipment, as normal continuous shore loads will be significantly lower than 170 amps. Normal continuous loads for the 110' WPB and 87' CPB will

likely be in the 40A-100A range, even with a fire pump energized.

Each 87' CPB will be delivered with a 75'-long shore tie cable, 3-wire, Part No. LSTHOF-150. The ship end of the cable will have a Russell Stoll Part No. JPS-2033FR plug. Commandant (G-SEC) policy established the following standard hardware for the shore end of the cable for 87' and 110' PBs: Russell Stoll Part No. DS-2404MP plug; Russell Stoll Part No. DBRS2404 shore power receptacle (MaxGuard). Connection points are frame 16, 1.75 meters inboard, port/starboard

(2) **Potable Water**. 1500 liters (396 gallons) per day, at 55 psi maximum. Use 1.5" hose valve connection. Connection point is 0.75 meters aft of frame 6, 0.75 meters starboard of centerline.

(3) **Sewage**. Minimum capacity of 1500 liters (396 gallons)/day. Use connection of 2.5" bronze valve to 4" flange (4 bolt). Connection point is frame 9, port side. Ship's pump rating is 35 gpm at 13 feet of head.

(4) **Bilge Water**. Minimum capacity of 350 liters (92 gallons)/day. Use connection of 2.5" bronze valve to 4" flange (4 bolt). Connection point is frame 14, port side. Ship's pump rating is 25 gpm at 13 feet of head.

(5) **Fuel**. Cutter is capable of receiving 950 liters/min. Two (2) connections required: (1) 2.5" pipe, threaded to 2.5" x7.5" N.H.; and, (2) 1.5" O pipe, threaded to 1.5" x11.5" NPTF for a Parker Hanifan Quick Disconnect Coupling. Connection point is 0.75 meters aft of frame 6, and 0.75 meters port of centerline.

(6) **Telephone**. Provide four (4) telephone line pairs. Use Russell Stoll type SKW receptacle and plug. Connection point is 0.5 meters forward of frame 16, 1.75 meters inboard port side.

(7) **Cable TV**. Provide one (1) commercial service. Connection point is 0.5 meters forward of frame 16, 1.75 meters inboard port side.

(8) **Local Area Network (LAN)**. The CPB has two pair fiber optic cables, terminated in ST connectors as

well as two pair copper lines (Telephone shore-tie pairs 5 and 6) for data transmission. Requirements for CGDN+ shore connections are currently under development at the USCG Telecommunication and Information Systems Command (TISCOM).

a) **Mooring devices and Deck fittings**. A minimum of three (3) bollards/cleats should be provided for each cutter (if not suitable for simultaneous use of two spring lines, four (4) bollards/cleats should be provided). Spacing not more than 30 feet apart.

b) **Fendering**. Soft, non-marking fendering will be provided along piers/bulkheads.

c) **Shore Support Facility Requirements**. Figures provided below are a guideline... actual figures will depend on local conditions (e.g., availability of shared facilities), and shall be based on the Shore Facilities Standards Manual, COMDTINST M11012.9.

(1) **Fire Protection**. Conform to National Fire Code recommendation. Local fire codes and possible fire hazards will determine the equipment and the type of protection needed at a specific pier. The CPB will have onboard one International Shore Connection (cutter) standardized for a 2-1/2" hose. Shoreside fire fighting water supply should be capable of 500 gallons/minute at 125 psi.

(2) **Refuse Removal**. Applicable local refuse removal procedures shall be utilized.

(3) **Parking Stalls**: Provide parking for 10 crew vehicles plus one (1) government vehicle.

(4) **Lighting**. At least 5 foot-candles for open working areas on a slip and in storage buildings while working.

2. **Work Space and Storage Facilities**. The 87' CPB s will utilize the same station facilities as the existing 82'WPBs. Commandant (G-SEC) will coordinate accomplishment of the following upgrades, where appropriate, prior to delivery when possible:

a. Office space: 250 net sq. ft
b. Cutter storage space: 250 net sq. ft
c. Parts/tool storage: 400 net sq. ft
d. Flammable storage: 40 net sq. ft
e. HAZMAT storage: 25 net sq. ft

3. **Support Facility Planning Procedures.** In most cases, existing support facilities will be utilized to support the 87' CPBs. Facilities should be upgraded concurrent with other Acquisition, Construction and Improvement (AC&I) projects in locations, which cannot meet the endorsed requirements. Certain situations may dictate initiating planning proposals specifically for CPB Support Facilities; the following procedures should be followed.

   a. Funding requests for AC&I projects will be initiated by Districts and submitted in accordance with the Planning and Programming Manual, COMDTINST M16010.1 (series), via the cognizant MLC and Area Commander.

   b. Projects that can be funded using Operating Expenses (OE) funds will be developed by Districts and submitted to the appropriate CEU/MLC office.

   c. For guidance concerning technical matters such as design loads for piers, cost estimates, shore facilities space allocation, and submittal of planning documents such as Planning Proposals (PPs) and AC&I Project Proposal Reports (PPRs), contact:

Commandant (G-SEC)
U. S. Coast Guard
2100 Second Street, SW
Washington, DC 20593-0001

E. **Configuration Management (CM).**

1. **Concept.** The purpose of Configuration Management (CM) is to establish the discipline for managing the functional and physical characteristics of a system as well as its documentation throughout the entire acquisition and support process. CM is the element of program management that ensures that uniform methods of configuration identification, technical reviews, configuration audits, configuration control, and configuration status accounting are implemented and maintained for each configuration item (CI) in each acquisition program. CM

efforts for the acquisition portion of the CPB project will be conducted in accordance with the CPB Configuration Management Plan (CMP). Proper logistics support cannot be provided unless the configuration of the patrol boats is properly managed. The support organization needs to know which equipment is installed so the correct spare parts, maintenance instructions, and crew skills can be provided. Before modifications are accomplished or new equipment is added, the impact on the operational capabilities and the logistic support organization must be assessed. Configuration management relies on configuration control. The following instructions shall be utilized in management of all configuration management efforts: Coast Guard Configuration Management For Acquisitions and Major Modifications, COMDTINST M4130.8 (series); Coast Guard Configuration Management During Sustainment, COMDTINST M4130,9 (series); and Coast Guard Configuration Control Boards, COMDTINST M4130.10 (series).

2. **Responsibilities**. The Coastal Patrol Boat (CPB) Configuration Control Board (CCB) has configuration management responsibility during the production phase until warranty expiration of the last boat in the contract. CM responsibility will be transferred from the Project Manager to the Program Manager/Sponsor upon warranty expiration (one year after delivery) of the last cutter in the project. Configuration control and configuration management is the responsibility of the Project Manager (Commandant (G-AWP)) during the acquisition phase. Commandant (G-AWP) will serve as the CCB Chairperson until the last cutter is delivered. Engineering Change Proposals (ECP), Deviations, Waivers, and during the operational phase, Configuration Change Requests (CCRs), Ship Alteration (ShipAlts) and Boat Alterations (BoatAlts) requests, will be reviewed by the CCB as part of the configuration control process. All CM efforts for the CPB will be conducted in accordance with the CPB Configuration Management Plan (CMP). Contractor CM requirements are detailed in Section 041 of the production specifications. Commandant (G-OCU) will chair the Configuration Control Board upon warranty expiration of the last cutter delivered, and publish configuration change procedures for all operational vessels. Commanding Officers and/or OICs are responsible for maintaining accurate allowance documentation. Program Manager/Sponsor and Commanding Officers/OICs are

responsible for maintaining the configuration of their patrol boats during the operational/service life. Configuration changes shall be made only as authorized by ShipAlts, BoatAlts, Electronics Field Changes, or other established, authorized procedure.

3. **Configuration Identification**. Configuration identification identifies and defines the configuration characteristics of Configuration Items (CIs) installed on each 87' CPB. CIs may differ widely in complexity, size, and kind (e.g., a patrol boat, propulsion system, navigation system, combat system, computer program, electronic system, feed pump, test equipment, or a round of ammunition are all considered possible CIs). The Product Baseline (PBL) for the 87'CPB cutters was established March 1998.

4. **Configuration Control**. Configuration control is the process of maintaining and regulating all changes to the CI or baseline. During the operational phase Engineering Change Proposals (ECPs), deviations, waivers; Configuration Change Requests (CCRs) and approved ShipAlts will be reviewed by the CPB CCB as part of the configuration control process. Funding for ShipAlts, and retrofits will be provided by the Program Manager on a case-by-case basis based on the recommendation of the CCB. All configuration change requests will be reviewed by the Configuration Control Board (CCB). Field requests for configuration changes shall be submitted according to the instructions contained in the Naval Engineering Manual, COMDTINST, M9000.6 (series).

5. **Configuration Status Accounting CSA).** Configuration status accounting provides accountability for all changes to each CI. At the patrol boat level, the primary concern is that allowance lists properly reflect installed equipment. Allowance lists shall be maintained according to the instructions accompanying individual allowance documents. The Project Manager will maintain a record of changes to technical manuals, drawings, test documentation, and provisioning documentation until each cutter is turned over to Commandant (G-OCU). The Contractor provides a CSA listing for each delivered cutter. This list identifies installed equipment and identifies it to its applicable drawing, Provisioning Technical Data (PTD) list, and technical manual.

F. **Packaging, Handling, Storage and Transportation (PHS&T).**

1. **Normal PHS&T.** Normal PHS&T requirements shall comply with requirements referenced in Chapter 5.F of this plan. In addition, contractor furnished shoreside spares and system stock shall be preserved, packaged, packed and marked in accordance with ASTM D3951. Marking will be in accordance with MIL-STD-129M.

2. **Special PHS&T.** Packaging, Handling, Storage and Transportation (PHS&T) of ICP controlled material will be accomplished in accordance with the Supply Policy and Procedures Manual, COMDTINST M4400.19 (series); the Inspection, Packaging, Handling, Storage and Transportation Handbook, COMDTINST M4450.1 (series); and the Property Management Manual, COMDTINST M4500.5 (series). Introduction of the Bar Coding System to CPBs, Groups, and Bases will aid in equipment validation for all installed equipment. Specific requirements to accomplish bar coding efforts will be provided in accordance with Standardized Bar Coding within the Coast Guard, COMDTINST 4000.4 (series).

G. **Computer Resources Support.** Automated Data Processing (ADP) equipment to include Coast Guard Standard WorkStation II and III (CGSWII/CGSWSIII) and software will be installed to the degree necessary to support operational and administrative functions and will be maintained by Commandant (G-SCC). Commandant (G-SEN, G-SCE) or their designated representatives will provide support for all computer systems with the exception of CGSWII/CGSWIII. Warranty information and procedures for support pertaining to the cutters ruggedized laptop computers are contained in CPB Warranty Manual. Existing shoreside Automated Data Processing (ADP) equipment and software will be utilized to the degree necessary to support operational and administrative functions. A CMPLUS data base will be populated and provided, by G-SLS, to each unit as a configuration management tool to aid in the process of managing and tracking of maintenance items, in addition to configuration and inventory control.

H. **Technical Data.** Each cutter will receive one hard copy set of technical manuals along with interactive electronic technical manuals (IETMs) on CD-ROM diskettes. CD diskettes will be distributed to all applicable support activities. Maintenance updates to these CPB IETMs will be maintained by the CPB project until the ELC is fully capable of taking on

that responsibility. The ELC has indicated that this will likely occur during second quarter (2Q) FY 2000. CPB drawings shall be provided to all applicable support activities on CDs in AUTOCAD 13 format. Each cutter receives a hard copy of the "Final As-Built" drawings at ship delivery.

1. **Technical Publications**. The Coast Guards Engineering Logistics Center (ELC) promulgates, distributes, and maintains the general and manufacturers information books for the 87' CPBs. Technical Publications (TPs) will be provided to all stations, groups, MLCs and districts in accordance with current directives initially by the CPB project and the ELC. The ELC will assume management responsibility of the CPB technical publication (that are currently being provided on CD-ROM diskettes) and manage them in the Naval Engineering-Technical Information Management Systems (NE-TIMS). This will be available to the respective units when completed and also via the Coast Guard Intranet. A TP index is provided in enclosure (1), sections 3 and 4.

2. **Drawings**. The ELC will provide CPB drawings on CD-ROM diskettes in accordance with current Coast Guard directives to MLCs and other support commands as necessary. As provided by Bollinger, these drawings shall provide enough design information to enable a manufacturer of similar products at the same or similar state of art to produce and maintain quality control of items so that the resulting physical and performance characteristics duplicate those of the original setup. These drawings shall reflect the end product at its current level of design maturity and provide engineering data for logistics support products. In the future, CPB drawings will also be distributed via the Coast Guard Intranet.

I. **Miscellaneous**. The CPB project, through a Memorandum of Agreement (MOA) with the Naval Air Warfare Center, Training Support Division (NAWCTSD) will review CPB contractor provided training and develop a standardized set of personnel qualification modules (PQM) and computer-based training for the navigation system.

CHAPTER 7. MILESTONES

A. **Major Program Events.** Table 7-1 contains the major project events that have occurred and are scheduled to occur during the life of the project.

B. **Logistics Milestones.** Specific milestones associated with this OLSP are included in Table 7-2. The facility manager in accordance with the Operational Logistics Support Plan (OLSP) Development and Management Responsibility, HQINST 4081.2 instruction will conduct updates to these milestones.

TABLE 7-1

MAJOR PROJECT EVENTS

MAJOR PROGRAM EVENTS	SCHEDULED DATE	ACTUAL DATE	REMARKS
CONCEPT EXPLORATION			
1. COMPLETE INITIAL DOCUMENTATION	06/24/92	06/24/92	
2. PROGRAM SPONSOR AUTHORITY TO START	07/24/92	07/24/92	
3. COMPLETE DEFINITION OF INITIAL SUPPORT CONCEPT	08/30/93	07/30/93	
4. COMPLETE DEFINITION OF DEVELOPMENT OPTIONS	08/10/93	07/30/93	
5. SELECT ALTERNATIVE CONCEPTS FOR D&V PHASE	08/30/93	08/30/93	
6. KEY DECISION POINT - 2	11/15/93	12/28/93	
DEMONSTRATION AND VALIDATION (D&V)			
1. PRODUCTION CONCEPT SELECTED	10/30/93	12/28/93	
2. SPECS FOR LEAD CUTTER COMPLETE	10/30/93	12/28/93	
3. KEY DECISION POINT - 3	11/15/93	12/28/93	
FULL SCALE DEVELOPMENT			
1. LEAD CUTTER COR COMPLETE	03/25/94	02/28/95	
2. ISSUE FORMAL RFP**(REISSUED)	03/23/95	03/27/95	
3. PROPOSALS RECEIVED	05/23/95	05/26/95	
4. AWARD LEAD CUTTER CONTRACT	09/29/95	03/19/96	
5. LEAD CUTTER DELIVERY	02/24/98	04/09/98	
6. START TECHEVAL	03/31/98	04/16/98	
7. AWARD LRIP CONTRACT	08/18/97	08/20/97	
8. CERTIFICATION TO PROCEED TO OPEVAL	04/28/98	04/28/98	
9. COMPLETE OPEVAL	06/24/98	07/03/98	
10. INITIAL OPERATIONAL CAPABILITY	07/01/98	07/03/98	
11. KEY DECISION POINT - 4	09/20/98	11/05/98	
PRODUCTION			
1. AWARD PRODUCTION/OPTIONS CONTRACT	09/15/98	11/05/98	
2. FIRST PRODUCTION DELIVERY	07/28/99		
3. MATERIAL SUPPORT DATE (MSD)	07/28/99		
4. COAST GUARD SUPPORT DATE (CGSD)	07/28/00		
5. LAST PRODUCTION CPB DELIVERY	08/21/02		
6. EXPIRATION OF LAST PRODUCTION CPB CONTRACT WARRANTY	08/21/02		

TABLE 7-2

LOGISTICS MILESTONES

ACTION	MILESTONE	SCHEDULED DATE	ACTUAL DATE
	ILS PLANNING		
G-AWP	SCHEDULE ILSMT MEETINGS	AS SCHEDULED	ONGOING
G-AWP	ISSUE OLSP*	06/01/99	
	MAINTENANCE PLANNING		
G-SLS	INSTALL CMPLUS BASED PMS	02/08/99	02/08/99
ELC	UPDATE PMS	07/01/99	ONGOING
	SUPPLY SUPPORT		
ELC	COMPLETE PROVISIONING	06/01/99	ONGOING
ELC	PROVIDE MICA DOCUMENT	07/01/98	ONGOING
ELC	MATERIAL SUPPORT DATE (MSD)	07/01/99	
ELC	CG SUPPORT DATE (CGSD)	07/01/00	
G-AWP	DEVELOP TRANSITION PLAN	03/02/02	
	COMPUTER RESOURCES		
G-SLS	INSTALL CMPLUS APPLICATION	AS REQUIRED	ONGOING
	TECHNICAL DATA		
G-AWP	DISTRIBUTE INITIAL TECH PUB CDs	06/01/99	05/21/99
ELC	STOCK AVAILABLE TECH PUB CDs	06/01/99	05/21/99
ELC	DISTRIBUTE LEVEL 3 DRAWINGS/CDs	06/01/99	
ELC	DISTRIBUTE FOLLOW-ON TECH PUB CDs AND DRAWING CDs	AS REQUIRED	
	FACILITIES		
G-SEC	ENSURE FACILITIES ARE OPERATIONAL	AS REQUIRED	ONGOING
	TRAINING & TRAINING SUPPORT		
RTC	START FOLLOW-ON TRAINING	07/01/99	

*** OLSP will be issued prior to first production cutter delivery, which is scheduled for 28 Jul 99.**

APPENDIX A

GLOSSARY OF ACRONYMS/TERMS

AASHTO	**AMERICAN ASSOCIATION of STATE HIGHWAY and TRANSPORTATION OFFICIALS**
AC&I	**ACQUISITION, CONSTRUCTION AND IMPROVEMENTS**
ADP	**AUTOMATED DATA PROCESSING**
AEL	**ALLOWANCE EQUIPAGE LIST.** Listing by specific categories of allowance items of a durable nature, which must be on board for the cutter/boat to perform its mission. It includes non-installed equipage, tools, special and common support and test equipment.
APL	**ALLOWANCE PARTS LIST.** Coded listing of maintenance significant repair parts for specific shipboard equipment or components.
ATE	**AUTOMATIC TEST EQUIPMENT**
CASREPS	**CASUALTY REPORTS**
CCB	**CONFIGURATION CONTROL BOARD.** The authority responsible for evaluating and approving or disapproving proposed engineering changes, and ensuring implementation of the approved changes.
CCR	**CONFIGURATION CHANGE REQUEST**
CEU	**CIVIL ENGINEERING UNIT.** Formerly known as the Shore Maintenance Detachment (SMD).
CFE/CFM	**CONTRACTOR FURNISHED EQUIPMENT/CONTRACTOR FURNISHED MATERIAL**
CGSD	**COAST GUARD SUPPORT DATE.** The date upon which all logistics support for the cutters is provided by the Coast Guard. This is one year after delivery of the first production Coastal Patrol Boat.
CI	**CONFIGURATION ITEM**

CM	**CONFIGURATION MANAGEMENT.** A discipline applying technical and administrative direction and surveillance to (1) properly identify, (2) control changes to, and (3) record the change implementation status of the total configuration of systems, end items, equipment and applicable items throughout their life cycle.
CMP	**CONFIGURATION MANAGEMENT PLAN**
COR	**CIRCULAR OF REQUIREMENTS**
COSAL	**COORDINATED SHIPBOARD ALLOWANCE LIST**
CPB	**COASTAL PATROL BOAT**
CSA	**CONFIGURATION STATUS ACCOUNTING**
CSF	**CUTTER SYSTEMS FILE.** The Coast Guard computer files used for equipment configuration, status accounting and inventory management.
CSMP	**CUTTER SHIP MAINTENANCE PROJECTS**
DOD	**DEPARTMENT OF DEFENSE**
ECP	**ENGINEERING CHANGE PROPOSAL.** A document used to propose an alteration in the configuration item or in the item's current configuration identification.
ELC	**ENGINEERING LOGISTICS CENTER.** Logistics center for management of HM&E, electronics and general use material.
ELT	**ENFORCEMENT OF LAWS AND TREATIES**
ESD	**ELECTRONIC SUPORT DETACHMENT**
ESU	**ELECTRONIC SUPPORT UNIT**
GFE/GFM	**GOVERNMENT FURNISHED EQUIPMENT/GOVERNMENT FURNISHED MATERIAL**
GUCL	**GENERAL USE CONSUMABLE LIST**
HM&E	**HULL, MECHANICAL, AND ELECTRICAL**

ICP	**INVENTORY CONTROL POINT.** The organizational unit or activity within a supply system, which is, assigned the primary responsibility for materiel management of a group of items either for a particular service or for the Defense Department as a whole.
ILS	**INTEGRATED LOGISTICS SUPPORT**
ILSP	**INTEGRATED LOGISTICS SUPPORT PLAN**
JQR	**JOB QUALIFICATION REQUIREMENT**
MER	**MARINE ENVIRONMENTAL RESPONSE**
MICA	**MANAGEMENT INFORMATION FOR CONFIGURATION ALLOWANCES**
MLC	**MAINTENANCE AND LOGISTICS COMMAND**
MLCLANT	**MAINTENANCE AND LOGISTICS COMMAND, ATLANTIC**
MLCPAC	**MAINTENANCE AND LOGISTICS COMMAND, PACIFIC**
MNS	**MISSION NEED STATEMENT**
MOA	**MEMORANDUM OF AGREEMENT**
MOU	**MEMORANDUM OF UNDERSTANDING**
MSO	**MAINTENANCE SUPPORT OUTLINE.** A document which identifies the level of provisioning required.
MTL	**MASTER TRAINING LIST**
NESU	**NAVAL ENGINEERING SUPPORT UNIT.** Coast Guard Command under the direction of the MLC, which is responsible for providing maintenance support services to individual units through appropriate intermediate commands. Formerly known as the Ship Repair Detachment.
NSN	**NATIONAL STOCK NUMBER**
OBRP	**ON-BOARD REPAIR PARTS**
OE	**OPERATING EXPENSE**

OGA	**OTHER GOVERNMENTAL AGENCY**
OJT	**ON-THE-JOB TRAINING**
OLSP	**OPERATIONAL LOGISTICS SUPPORT PLAN.** A logistics support document that summarizes operational support requirements data contained in the final Integrated Logistics Support Plan (ILSP). The OLSP is used by supporting organizations during the operational portion of the system/equipment life cycle.
ORD	**OPERATIONAL REQUIREMENT DOCUMENT.** A document that provides early detailed requirements for the project and the system's operating parameters. The ORD includes information, i.e., project description, anticipated mission requirements, shortcomings of existing system(s), affordability constraints, Integrated Logistics Support, and related system developments. Formerly known as the Sponsor's Requirement Document (SRD).
PMS	**PREVENTIVE/PLANNED MAINTENANCE SYSTEM**
PP	**PLANNING PROPOSAL**
PPR	**PROJECT PROPOSAL REPORT**
PQM	**PERSONNEL QUALIFICATION MODULE**
PQS	**PERSONNEL QUALIFICATION STANDARD**
PSS	**PORT SAFETY AND SECURITY**
RBS	**RECREATIONAL BOATING SAFETY**
RCP	**RESOURCE CHANGE PROPOSAL**
RM&A	**RELIABILITY, MAINTAINABILITY AND AVAILABILITY**
SAB	**STUDENT ANSWER BOOKLET**
SAR	**SEARCH AND RESCUE**
SHIPALT	**SHIP ALTERATION**
SMEF	**SYSTEMS MANAGEMENT ENGINEERING FACILITY**
SM&R	**SOURCE, MAINTENANCE, AND RECOVERABILITY**

S&TE **SUPPORT AND TEST EQUIPMENT.** Support items required to inspect, test, calibrate, service, repair, or overhaul an end item.

TQC **TRAINING QUOTA MANAGEMENT CENTER.** Administrative headquarters unit responsible for generating the training schedule and obtaining training quotas. Formerly called the Ship Introduction Unit (SIU).

WSF **WEAPON SYSTEMS FILE.** The Navy computer files used for equipment configuration, status accounting and inventory management.

87' COASTAL PATROL BOAT

MAINTENANCE SUPPORT OUTLINE

(MSO)

24-Feb-99

TABLE OF CONTENTS

PART ONE

1. Introduction

This Document begins to develop a maintenance plan for the 87' Coastal Patrol Boat Class. Its purpose is to provide direction and guidance to the integrated logistics support efforts for the WPB replacement project during the acquisition phase and to allow for a smooth transition into the sustainment phase from the Naval Engineering and Electronics support perspective.

1.1 Document Organization

Part One: This section contains an overview of the Coastal Patrol Boat's operational and technical characteristics, personnel requirements, installed equipment, systems, and maintenance strategy. It is intended to assist program level and field unit maintenance staffs prepare and review support plans for their areas of responsibility.

Part Two: This section is based on the technical and maintenance information received from the contractor in the form of the integrated logistics analysis and the CM Plus database. It represents the information presently available comprising a breakdown of onboard systems, sub-systems, and components by individual maintenance task. Information is provided regarding supply, funding, and maintenance responsibility as well as maintenance item description, specific equipment data, and disposal authority. It is intended primarily for use by the Engineering Logistics Center for provisioning of system stock and assignment of repair authority and by the Maintenance and Logistics Commands, Naval Engineering Support Units, Electronics Support Units, and District Program Managers for maintenance resource and AFC45/42/30 funding allocations.

1.2 Relationship to Other Documents

This document is intended to be used in conjunction with the Operational Logistics Support Plan which is published by Commandant (G-AWP), but will be maintained and updated by G-OCU. Any discrepancy between these two documents should be referred to Commandant (G-SEN).

Additional documents which serve as useful references:

a. Project Management Plan (PMP)
b. Operational Requirements Document (ORD)
c. Integrated Logistics Support Plan (ILSP)
d. Configuration Management Plan (CMP)
e. Test and Evaluation Master Plan (TEMP)
f. Independent Operational Assessment (IOA)
g. Manufacturer's Technical Manuals
h. COMDTINST M4105.4, Long Range Planning of Logistic Support for Operational USCG Cutters
i. COMDTINST M4150.2B, System Acquisition Manual
j. COMDTINST M4423.3, Provisioning Manual
k. COMDTINST M9000.6 (series), Naval Engineering Manual
l. COMDTINST M10550.25, Electronics Manual

1.3 Document Progression

This document will follow a progression from a philosophy to a detailed plan. At present, this philosophy is based mainly on the Operational Requirements Document (ORD) and The Circular of Requirements (COR). As the document matures, more contractor submitted Provisioning Technical Documentation (PTD) will be incorporated as well as input from the existing patrol boat support structure and developments from the efforts of Coast Guard acquisitions and naval engineering personnel.

1.4 Maintenance Planning Event Schedule

Table 1 provides a timeline of key maintenance planning events and review milestones.

Table 1

September	1997	Maintenance Support Outline (MSO)
October	1997	Cutter Class Maintenance Plan (Initial Draft)
December	1997	Transitional Cutter Support Review (G-SEN, ELC, MLCs)
January	1997	LSA Database mapped to CMPlus Database
January	1997	Cutter Class Maintenance Plan (CCMP)
Jan/Feb	1998	PMS Conference Chaired by ELC
February	1998	Promulgate Initial Draft PMS
April	1998	Lead Boat Delivery
May/June	1998	OT&E (Eureka, CA)
July	1998	First LRIP Vessel Delivery
November	1998	Populate CMPlus Database
December	1998	Provide PMS 2000 Authored PMS

March	1999	Cutter Class Maintenance Plan
March	1999	Expanded Ship Work Breakdown Structure (ESWBS) Manual

1.5 Cutter Support Reviews

A Transitional Cutter Support Review was conducted, as listed in Table 1, in December 1997. The purpose of this review was to outline maintenance and funding responsibilities as well as review available provisioning data prior to the lead boat becoming operational. Commandant (G-SEN) will publish the results of this review in the Cutter Class Maintenance Plan.

2. Mission Profile and Principle Characteristics

2.1 Mission Profile

The Coastal Patrol Boat will be required to perform all primary missions through sea state five with the exception of small boat operations which will be a requirement through-sea state four. The vessel's primary missions will be as follows:

a. Search and Rescue (SAR)
b. Enforcement of Laws and Treaties (ELT)
c. International/Domestic Living Marine Resources Enforcement
d. Recreational Boating Safety (RBS)
e. Port Security and Safety (PSS)

2.2 Vessel Principle Characteristics

Table 2 provides a list principle characteristics of the Coastal Patrol Boat.

Table 2

Length Overall (LOA)	26.5	Meters (86'11")
Length @ DWL	24.87	Meters (5'10")
Beam Molded	5.92	Meters (19'4")
Draft, Maximum	1.74	Meters (5'10")
Displacement	91	Metric Tons (89.85 LT)
Speed, Maximum Patrolling Maneuvering (Minimum)	25 10 4	Knots Knots Knots
Range 15% @ Max Spd, 85% @ Ptrl Spd w/10% Reserve Fuel	72	Hours
Endurance (Provisions)	5	Days
Complement	10	Persons
Fuel Oil Capacity	10,600	Liters (2798.4 Gal.)

Potable Water Capacity	1500	Liters (396 Gal.)
Gray Water Holding	170	Liters (44.88 Gal.)
Sewage Holding	162	Liters (42.77 Gal.)

2.3 Principle Performance Capabilities

a. The CPB will be equipped with a rigid inflatable boat (RIB) and a launching system, which is capable of launch and recovery in seas up to 2.5 meter significant wave height.

b. The CPB will be capable of receiving fuel with the use of quick-disconnect fittings.

c. The CPB will be capable of towing another vessel up to 200 tons displacement.

d. The CPB will be capable of engaging in vertical hoist operations with a helicopter.

2.4 Employment Profile

Table 4 provides a summary of the vessel employment profile.

Table 4

Type of Vessel Employment	Days/Year (expected)
Underway / Inport (B-2 Status)	209
Maintenance, Planned	133
Maintenance (DS, DD)	23

2.5 Vessel Homeport Information

The first 6 CPBs have been delivered and have or will transition to their respective homeports*. All follow-on hulls will transition as follows:

Hull Number and Cutter Name	District	Group	Existing 82' and New CPB Homeports
87301-USCGC BARRACUDA	11	Group Humbolt Bay	Eureka, CA
87302-USCGC HAMMERHEAD	1	Group Woods Hole	Woodshole, MA
87303-USCGC MAKO	5	Group Atlantic City	Cape May, NJ
87304-USCGC MARLIN	7	Group St. Petersburg	Fort Myers, FL
87305-USCGC STINGRAY	8	Group Mobile	Mobile, AL

87306-USCGC DORADO	11	Group LA/Long Beach	Crescent City, CA
87307-USCGC OSPREY	13	Group Port Angeles	Port Townsend, WA
87308-USCGC CHINOOK	1	Group Moriches	New London, CT
87309-USCGC ALBACORE	5	Group Hampton Roads	Little Creek, VA
87310-USCGC TARPON	7	Group Charleston	Tybee Island, GA
87311-USCGC COBIA	8	Group Mobile	Mobile, AL
87312-USCGC HAWKSBILL	11	Group San Diego	Monterey, CA
87313-USCGC CORMORANT	7	Group Tampa	Fort Pierce, FL
87314-USCGC FINBACK	5	Group Atlantic City	Cape May, NJ
87315-USCGC AMBERJACK	8	Group Galveston	Port Isabel, TX
87316-USCGC KITTIWAKE	14	Group Honolulu	Nawiliwilli, HI
87317-USCGC BLACKFIN	11	Group LA/Long Beach	Santa Barbara, CA
87318-USCGC BLUEFIN	7	Group Tampa	Fort Pierce, FL
87319-USCGC YELLOWFIN	7	Group Charleston	Charleston, SC
87320-USCGC MANTA	8	Group Galveston	Freeport, TX
87321-USCGC COHO	8	Group Mobile	Panama City, FL
87322-USCGC KINGFISHER	7	Group Mayport	Mayport , FL
87323-USCGC SEAHAWK	8	Group Mobile	Apalachicola, FL
87324-USCGC STEELHEAD	8	Group Galveston	Port Aransas, TX
87325-USCGC BELUGA	5	Group Hampton Roads	Portsmouth, VA
87326-USCGC BLACKTIP	11	Group LA/Long Beach	Oxnard, CA
87327-USCGC PELICAN	8	Group New Orleans	Morgan City, LA
87328-USCGC RIDLEY	1	Group Moriches	Montauk, NY
87329-USCGC COCHITO	5	Group Hampton Roads	Little Creek, VA
87330-USCGC MANOWAR	8	Group Galveston	Galveston, TX
87331-USCGC MORAY	1	Group Southwest Harbor	Jonesport, ME
87332-USCGC RAZORBILL	8	Group New Orleans	Gulfport, MS
87333-USCGC ADELIE	13	Group Port Angeles	Port Angeles, WA
87334-USCGC GANNET	7	Group Mayport	Cape Canaveral, FL
87335-USCGC NARWHAL	8	Group Galveston	Corpus Christi, TX
87336-USCGC STURGEON	11	Group LA/Long Beach	Newport Beach, CA
87337-USCGC SOCKEYE	8	Group New Orleans	Grand Isle, LA
87338-USCGC IIBIS	11	Group San Francisco	Bodega Bay, CA
87339-USCGC POMPANO	5	Group Atlantic City	Cape May, NJ
87340-USCGC HALIBUT	8	Group New Orleans	Gulfport, MS
87341-USCGC BONITO	11	Group LA/Long Beach	Marina Del Rey, CA
87342-USCGC SHRIKE	8	Group Mobile	Pensacola, FL
87343-USCGC TERN	11	Group San Francisco	San Francisco, CA
87344-USCGC HERON	8	Group Galveston	Sabine, TX
87345-USCGC WAHOO	5	Group Atlantic City	Cape May, NJ
87346-USCGC FLYINGFISH	1	Group Woods Hole	Newport, RI
87347-USCGC HADDOCK	11	Group San Diego	San Diego, CA
87348-USCGC BRANT	11	Group San Francisco	Half Moon Bay, CA
87349-USCGC SHEARWATER	13	Group Port Angeles	Port Angeles, WA
87350-USCGC PETREL	5	Group Hampton Roads	Little Creek, VA

* This section will be updated if there are any changes in homeport locations.

3. Electronics and Communication

3.1 Government Furnished Equipment (GFE):

Tech. Pub. info	Equipment Description	Model
TP-4517	VHF Marine Radio	**Ross** DSC 500
TP-4546	Surface Search Radar	**Raytheon** AN/SPS-73(V)11

3.2 Contractor Furnished Equipment (CFE):

Tech. Pub. info	Equipment Description	Model
TBD	Loudhailer 6MC	**United Marine** UM-HSWR-20
TBD	Radar	**Raytheon** R20XX
TP-4500	GPS/LORAN	**Raytheon** RAYNAV 398
TP-4504	Guard Receiver	**Sailor** R 501
TP-4507	HF Radio	**Sunair** RT-2400A
TP-4508	Depthsounder	**Raytheon** V850
TP-4509	ECDIS	**Transas Marine** NS2400S
TP-4510	HF Weather Fax	**Furuno** FAX-207
TP-4545	Cellular Telephone	**Motorola** 2900
TP-4547	Digital Auto Antenna Coupler	**CU-2430**
TP-4550	UHF Marine Antenna	AS390A/SCR
TP-4574	ADF	**TechCom** TC-525A/USCG
TP-4577	Color Monitor	**Intercooler V80 Monitor**
TP-4580	1MC Announcing System	**United Marine** UM-ICSC-1338
TP-4590	HP Vectra PC	**Hewlett Packard**

* The Electromagnetic Speed Log (EML-150) will replace the Doppler Speed Log (DSL-120) manual. The technical publication number will be TP-4502A.

3.3 Government Installed Equipment:

Tech. Pub. info	Equipment Description	Model
	Secure Comms Equipment	
TBD	Computers	**Unysis** SWSIII
FMR-1727A-1	VHF DES Radio	**Motorola** W9 Spectra
TBD	VHF DES Handheld	**Motorola** Astro
TBD	UHF	AN/WSC-3(V)6

4. Hull Mechanical and Electrical

4.1 Government Furnished Equipment (GFE):

Tech. Pub. info	Equipment Description	Model
TBD	Machine Gun Mounts	.50 Cal

4.2 Contractor Furnished Equipment (CFE):

Tech. Pub. info	Equipment Description	Model
TBD	R/O Water Maker	**Village Marine** PW200
TBD	Potable Water Pump/Motor	**Scot** Model 87-16
TBD	Potable Water Pressure Tank	**Myers** Diaphragm MPD36
TP-4501	Gyrocompass	**Raytheon** Standard 20
TP-4502	Underwater Log	**Raytheon** DSL-150 *
TP-4503	Wind Speed/Direction Log	**RM Young Co.** 05106
TP-4506	Autopilot	**Raytheon** Piltostar AP02-S02
TP-4512	Sewage Transfer Pump	**Pump Systems** PGL150
TP-4513	Air Compressor	**Cambell Hausfeld** WTS 115801
TP-4514	Range/Oven/Griddle	**Toastmaster** M436M9
TP-4515	FLOCS Pump	**Scott** 10GB61122
TP-4516	Ship's Service Diesel Engine	**MAN** D0824LF 01
TP-4518	Fuel Injection Pump	**Bosch**
TP-4519	Solenoid Actuator	**MTU**
TP-4520	Geislinger Coupling	**MTU**
TP-4521	MTU Process Level Assembly	**MTU**
TP-4522	Reduction Gears	**ZF** BW-255
TP-4523	MTU Electronic Controls	**MTU**
TP-4524	MTU Control Panel	**MTU**
TP-4525	MTU Display Panel	**MTU**

TP-4526	Toaster	**Richards** TP120
TP-4527	Guard Receiver	**Scientific Radio Systems** SR 501R
TP-4528		**NOT USED**
TP-4529	Compact Vacuum Toilet	**EVAC** 547-05MB
TP-4530	Fire Alarm Control System	**ANSUL** 50499-301-CPB
TP-4531	MTU Main Diesel Engines	**MTU** 8V 396 TE94
TP-4532	MTU Parts Catalog	**MTU** 8V 396 TE94
TP-4533	MTU Maintenance Manual	**MTU** 8V 396 TE94
TP-4534	MTU Tools List	**MTU** 6V-16V 396 TE94
TP-4535	MTU Fluids and Lubricants	**MTU** 8V 396 TE94
TP-4536	MTU Tolerances & Wear Limits	**MTU** 8V 396 TE94
TP-4537	MTU Exhaust Turbocharger	MTU ZR 140
TP-4538	Windlass	480V AC
TP-4539	Fuel Filter	**SEPAR**
TP-4540	Chilled Water Pump	**Pump Systems** KC-2
TP-4541	Oily Water Separator	**Sep. & Recovery** VGS-2 w/BA
TP-4542	Lube Oil Evacuation Pump	
TP-4543	Pump	**AMPCO 1 HP**
TP-4544	Battery Charger	**Lamarche** A41-7524V-12LA1
TP-4548	Reefer	**RTF** MAR-13-9-HLTADB
TP-4549	Trash Compactor	**Whirlpool** TU800SPDB
TP-4551	Coffee Maker	**Richards** 0T-20
TP-4552	Dishwasher	**Jackson** C00241
TP-4553	Self Priming Pump	**Jabsco**
TP-4554	P/W Brominator	**Village Marine** RB5CMD
TP-4555	Battery Charger	**12 Volts DC**
TP-4556	Battery Charger	**24 Volts DC**
TP-4557	Ship's Service Generator	**Stamford** UCM224F13
TP-4558	Window Wiper w/Pump	**BECLAWAT Ind**
TP-4559	Engine Room Ventilation System	**Delta T-System** 224183
TP-4560	Ventilation Control System	**Delta T-System**
TP-4561	Winch	**AC Superwinch 2500**
TP-4562	HVAC System	**Novenco** MTE 100 HS-K 262 H
TP-4563	Exhaust Hood System	**Gaylord**
TP-4564	Helm Pump Steering Unit	**Kobelt**
TP-4565	Window Wiper Controller	**BECLAWAT Ind**
TP-4566	Search Light	**Xenon 350 Watts**
TP-4567		**NOT USED**
TP-4568	Plant Control System	**MTU** RCS-5
TP-4569	Speed Log Transducer Manual	**Japan Radio Co. LTD** JLN-202
TP-4570	Waste Oil Pump	**Scott** 168
TP-4571	CO2 Fire Suppression System	**(Herbert Hiller** 87WPB555-001**)**
TP-4572	Switchboard (Lighting Panels)	
TP-4573	Coolant Heat System Manual	**MTU** 771903-1/7719903-2

TP-4575	Water Heater	**Ruud** PE-52-2
TP-4576	Liferaft	**SEASAV Plus**
TP-4578	Centrifugal Oil Filter	**MTU**
TP-4579		**NOT USED**
TP-4581	RIB	**Ambar** AM 550 CPB
TP-4582	RIB Engine	**Yanmar** L4,12YN
TP-4583	Fire/Bilge Pump	**Grundfos** CRN30-50
TP-4584	Marine Water Jet	**Nomera** 12 YHT
TP-4585		**NOT USED**
TP-4586		**NOT USED**
TP-4587	Radar	**Raytheon 20XX**
TP-4588	Sound Powered Headset	**H-200/U**
TP-4589	Sound Powered Handset	**H-203/U**
TP-4591	Dewatering Pump	**CG** P-1B
TP-4592		**NOT USED**
TP-4593		**NOT USED**
TP-4594	Fire Pump, Portable	**W.S. Darley** P-100 (2BE10YDN)
TP-4595		**NOT USED**
TP-4596		**NOT USED**
TP-4597		**NOT USED**
TP-4598		**NOT USED**
TP-4599	Cutter Information Book	

5. **Personnel**

5.1 Crewing Concept

A crew of ten (10) or less will operate the Coastal Patrol Boat. This value, which was generated by the sponsor, is the crew size reflected in the CPB COR. The actual crew size assigned will be consistent with those previously assigned to the 82' WPBs. The following is the present manning requirement:

Position	Rate/Rank	Position	Rate/Rank
CO/OIC	LTJG/MCPO/SCPO (BM/QM)	**ENG 3**	FN
XPO	BM1/QM1	**OPS 1**	FS2
EPO	MKC	**OPS 2**	BM2/QM2
ENG 1	MK2	**OPS 3***	SNBM/SNQM
ENG 2	FNMK	**OPS 4**	SN

The Coastal Patrol Boat is designed and outfitted to allow for an unmanned engine room. Open water, underway watch is intended to require one Engineer Of the Watch, one Officer Of the Deck, and one Helmsman/Lookout.

5.2 Training

5.2.1 Pipeline training for personnel assigned to a CPB will most likely consist of a combination of Resident training, DC Team Training, and training courses developed by the Coast Guard with the use of the factory training materials received through the CPB contract. This will be done as a joint effort between Commandant G-AWP, G-SEN, G-WTT, G-SRF, and other subject matter experts (SMEs).

5.2.2 Familiarization training will be provided by the contractor for approximately twelve (12) Coast Guard personnel per boat. Pre-commissioning crews will undergo this performance based training program for the CPB's equipment and systems.

5.2.3 Factory training will be provided by the contractor. This training will cover all operational and intermediate level aspects of equipment maintenance, troubleshooting, and operation. Factory training will be conducted by factory authorized instructors. The contractor will provide factory training curriculum materials to the Coast Guard for instruction of CPB personnel subsequent to the pre-commissioning crews. The contractor will provide factory-training courses on the following systems for approximately five (5) Coast Guard personnel per hull delivered:

a. Propulsion System (including control system)
b. Main Diesel Engines
c. Reduction Gears
d. Ship's Electrical Generating System
e. Ship's Service Generator Diesel Engines
f. Ship's Control Console
g. Steering System
h. ECDIS
i. Surface Search Radar(s)

6. **Maintenance**

6.1 Maintenance Levels

The maintenance concept for the CPB will be based on the tri-level maintenance organization described in COMDTINST M9000.6 (series), Naval Engineering Manual.

6.1.1 Organizational level maintenance consists of routine maintenance as well as facility and corrective maintenance for which the crew has been trained, equipped, and funded to accomplish. Routine maintenance includes all required PMS. Facility maintenance which falls into this category includes exterior painting above the full load waterline, painting of machinery, resealing of wet deck spaces, minor tile repairs, and other minor, non-structural repairs. These repairs may be accomplished by a local contractor using unit AFC-30 funds. Some organizational maintenance may be accomplished in conjunction with intermediate and depot level maintenance when requested by the unit and approved by the MLC.

6.1.2 Intermediate level maintenance consists of the following:

a. Electronic equipment maintenance
b. Electrical maintenance
c. Facility or corrective maintenance, which is not considered to be depot level maintenance, requiring resources or technical expertise beyond those normally available to the crew

6.1.3 Depot level maintenance consists of the following:

a. Hull and structural repairs above and below the waterline, deckhouse repairs, main diesel engine major repairs and overhauls, major repairs and overhaul of other equipment such as deck machinery and steering machinery.

b. Preventive maintenance such as underwater body and inaccessible void inspections, sea valve overhaul, meter calibration, propeller and stern tube inspections which require dry-docking.

c. Facility maintenance such as major recoating of tanks, voids, and bilges, interior deck coating renewal, and painting of underwater body.

6.2 Maintenance Cycle

A three (3) year dry-docking (DD) cycle: six (6) week DD period, four (4) week annual availability (AA) period during the non-dry-docking year, twelve (12) additional weeks annually (on average) for maintenance and repair activities

6.3 HM&E Maintenance

The CPB crew will be responsible for the completion of all organizational maintenance including scheduled maintenance and some low-level corrective maintenance of onboard systems and components. Crew repair capabilities will be focused on those required to restore mission critical systems and hotel services to operational status. Whenever practical, component replacement will be chosen over onboard component repair. Actual upper limit of organizational planned maintenance will be determined to a large degree by overall maintenance requirements and the associated workloads.

The Group and respective MLC will be responsible for the completion of intermediate and depot level maintenance for electrical and electronic systems as well as all facility or corrective maintenance requiring resources or technical skills beyond those normally available to the crew. The respective MLC will be responsible for the completions of depot level maintenance, which includes W-5 and W-6 level maintenance (top end and center section MDE overhauls).

At present the 87' CPB is expected to operate within the land based support envelope now available to the 82'WPB. When maintenance requirements have been better defined a need for additional support, if necessary will be addressed. A need for additional electrical support is the most probable possibility.

6.4 Main Diesel Engine Maintenance

Planned maintenance of the MTU 8V 396 TE94 is segregated into six levels (W1-W6) ranging from operational checks to a complete overhaul. All maintenance procedures included in maintenance levels W1 through W3 will be completed by the boat crews as organizational maintenance. This range includes maintenance procedures up to a quarterly engine head inspection. The boat's crew is capable of completing most of the maintenance procedures included in maintenance level W4 with the exception of such things as injector testing due to either the lack of available equipment or experience.

W5 maintenance, referred to as a top end overhaul, will be conducted by a depot level maintenance activity. The maintenance philosophy followed to carry-out top end overhauls of the MTU engines will ultimately be determined by the respective MLC. A major issue within this scope is whether to remove/overhaul/replace or to remove/renew engine head assemblies. Component renewal, if economically sound, would be the most advantageous due to the reduced impact on operational availability. The use of commercial contracts to conduct this work will be based on funding and government maintenance support availability. The vessel design allows sufficient workspace to perform an MDE top end overhaul in place.

All W6 maintenance, which comprises a major overhaul, will be conducted by the Central Engine Overhaul Engine (CEO) program at the Coast Guard Yard. Propulsion system insurance spares maintained by the ELC will be integrated into the CEO program while maintaining an acceptable amount of insurance spares. This would avoid stagnation of insurance spares. The funding for overhaul and the technical support will be the responsibility of the respective MLC. The stocking responsibility of spare parts intended for both casualty correction and scheduled maintenance is addressed in section 6.10 of this document.

6.5 Reliability Centered Maintenance

Reliability centered maintenance (RCM) is based on the inherent reliability designed into the system or equipment. RCM is implemented to optimize reliability of critical equipment while minimizing maintenance task requirements. System reliability, redundancy, and criticality are used to develop the optimal maintenance plan for a given system. Fleet PMS is being be developed from a contractor RCM analysis and a Coast Guard PMS2000 review.

6.6 Electronics Maintenance

This section contains the recommended maintenance philosophies of the equipment to be installed aboard the coastal patrol boat. As the equipment configuration changes, this MSO will be revised. The following is a description of the information contained in the chart at the end of this outline.

6.6.1 Organizational Level Maintenance for electronics will be limited to general cleaning and operator system checks, since there is no Electronics Technician (ET) on board.

6.6.2 Intermediate level maintenance will be performed by the local Electronics Support Detachment (ESD), Electronics Support Unit (ESU), or commercial contractor. Intermediate level electronic maintenance consists of CGPMS, replacing/cleaning filters and equipment interior, calibration, alignment, component or module replacement, and casualty troubleshooting and correction. Intermediate maintenance will usually involve onboard unit or module replacement with repair of the original equipment occurring at the ESD or ESU.

6.6.3 Depot level maintenance is performed by the Engineering Logistics Center (ELC), Maintenance and Logistics Center (MLC), commercial contractor, or other assigned activity. Depot level electronic maintenance consists of module repair, equipment overhaul, major equipment upgrades, and casualty assistance beyond the capabilities of the intermediate level activity.

6.6.4 A more detailed electronics maintenance plan is provided in Attachment A to this plan.

6.7 Warranty Information

The contract includes a contractor supported twelve (12) month warranty period for each boat delivered, each item provided under contract provided supply support for each boat delivered, and each item procured under the insurance spares provisions of this contract. In addition, all expressed commercial warranties offered to the general public [i.e., "Warranties for Commercial Items":] for equipment and supplies identical to that provided for the CPB equipment and systems are provided to the government. Additionally, the contract also contains a clause for "Warranty of [All] Data". The warranty period for Data shall extend for three years after the completion of the line item of data. The commencement of all other warranties begin at acceptance of the item or in the case of the boat at preliminary acceptance. The PRO will make the final determination on whether or not an item is covered by one or more of the aforementioned warranties.

6.8 CMPlus

The Coastal Patrol Boat will be equipped with a fully populated CMPlus database. The database will contain all necessary information for the maintenance, support, and procurement of all system components and equipment onboard the vessel. This system will function as the PMS manual, configuration management record, and an accounting system for ordering and stocking materials and equipment.

6.9 Configuration Management

The guidance for the CPB class configuration is provided in the configuration management plan.

6.10 Spare Parts

The levels may be adjusted at future Cutter Support Reviews based on actual parts demand within the existing CPB fleet. The installed CM Plus system will provide the accounting required to manage the onboard spare parts inventory.

The electronics support plan matrix in this enclosure uses the basic Source, Maintenance, and Recoverability (SM&R) codes defined in the Long Range Planning for Logistics Support, COMDTINST 4105.4 with minor modifications. SM&R Codes are five character codes that described how an item is managed. The codes are defined below.

Source Code—the first two characters of the SM&R code indicate how an item is to be obtained when replacement/repair is required. It indicates whether item should be requisitioned, obtained locally, or fabricated.

CODE	Explanation
PA	Managed item with NSN. Non deteriorative.
PB	Managed item with NSN. Stocked for insurance.
PC	Managed item with NSN. Deteriorative.
PF	Non-stocked support equipment.
XB	Non-stocked piece part (or end item).
MO	Non-stocked item local manufacture.
KF	Kit repair component. Non-stocked.

Maintenance Code—the third and fourth characters of the SM&R code indicate if the item is to be replaced/repaired at the user (organizational), ESU, NESU, MLC, or ELC level. Numeric codes indicate user (organizational) level and ALPHA codes indicate higher levels. Also, the letter Z in the 4th position indicates no repair.

Third character:	Who can replace?	Fourth character:	Who can repair?
CODE	**Explanation**	**CODE**	**Explanation**
		Z	No repair. (Consumable)
0	Station, MAT	0	Station, MAT
2	WL, WPB, CPB, WTGB	2	WL, WPB, CPB, WTGB
4	WMEC	4	WMEC
5	WHEC	5	WHEC
6	WAGB	6	WAGB
G	Group	G	Group
H	NESU	H	NESU
I	ESU/ESD	I	ESU/ESD
L	MLC	L	MLC
D	ELC	D	ELC
E	Manufacturer	E	Manufacturer
F	Other Agency	F	Other Agency

Recoverability Code—fifth character of the SM&R code determines who may authorize disposal of an item (i.e., condemn). . Numeric codes indicate user (organizational) level and ALPHA codes indicate higher levels.

CODE	Explanation
Z	Not repairable. Condemn at level indicated at 3rd character
0	Station, MAT
2	WL, WPB, CPB, WTGB
4	WMEC
5	WHEC
6	WAGB
G	Group
H	NESU
I	ESU/ESD
L	MLC
D	ELC
E	Manufacturer
F	Other Agency

PART TWO

Electronics Support Matrix.

COR SECTION	EQUIPMENT/SYSTEM DESCRIPTION	PART/ MODEL #	QTY	SM&R CODES
451	Surface Search Radar	AN/SPS-73/ 1722032-100	1	KF IE E
	Console Group	1720549-104	1	KF IE E
	Antenna	XN4A(U)	1	KF IE E
	Pedestal	RSB-0014	1	KF IE E
	Performance Monitor	PM-30 X-Band	1	KF IE E
445-2	HFSSB ALE Radio Set	RT-2400A	1	XB II D
	Transceiver	RT-2410	1	XB II D
	Control Head	C-2420A	1	XB II D
	Digital Automatic Antenna Coupler	CU-2430	1	XB II D
405	Antenna, HF	CEMT-390-2	1	PB IZ Z
445-4	VHF DES	Motorola W9 Spectra	1	XB II D
405	Antenna, VHF	4265	1	XB II D
	VHF-FM DSC Transceiver	ROSS DSC-500	1	XB II D
405	Antenna, VHF	4265	1	XB II D
445-5	UHF LOS TRANSCEIVER SET	AN/WSC-3(V)6	1	PB IZ Z
	Transceiver	RT-1107/WSC-3	1	XB ID D
	Remote Control	C-9351/WSC-3	1	XB ID D
	Antenna	AS390/SCR-51	1	XB ID D
430	Announcing System, 1MC	UM-ICSC-1338	1	
433	Loudhailer	UM-HSWR-20	1	
445-6	Secure Voice Crypto System			
		TSEC-KY-58	1	KF II F
		HYX-58	1	KF II F
		CV-3591	1	PA II F
		KYV-5	1	PA II F
	Remote Control Unit	C-11922/U	1	PB IZ I
	Standard Workstation III			
	Advanced Workstation	Pentium 133 MHz	1	
	Small Server	Pentium 133 MHz	2	
	Printer, Laser	HP	1	
	Workstations, Portable	Pentium 133 MHz	2	
445-3	Guard Receiver, 2182 KHz	R1026-R501	1	XB II D
405	Antenna, 2182 KHz	390-2	1	PB IZ Z
423-4	Depth Sounder System	Raytheon V850	1	XB II L
423-3	GPS/LORAN C Receiver	Raytheon 398	1	
405	Antenna, GPS/LORAN C	Raystar 108	1	
425	Electronic Charting System		1	
	NAVI Sailor	2400		
	PC	HP Vectra		

	Monitor	V80		
445-7	Facsimile, Weather	FAX-207	1	
405	Antenna, Facsimile, WX	FAX-5	1	
445-8	Telephone, Cellular	Motorola Sectel	1	
405	Antenna, Cellular Telephone	4801	1	
423-3	VHF Direction Finder	Techcomm TC525A	1	
405	Antenna, VHF DF	Techcomm	1	

COASTAL PATROL BOAT

MTU PROPULSION ENGINES

LUBRICATING OILS

Manufacturer	Brand Name	Single Grade	Multi Grade	SAE	Total Base Number (TBN)	Sulfur Ash
Shell	Rimula	X		30	12	1.65
Shell	Rimula	X		40	12	1.65
Castrol Marine	MLC30	X		30	12	1.65
Castrol Marine	MLC40	X		40	12	1.65
Mobil	Delvac 1330	X		30	13	1.7
Mobil	Delvac 1340	X		40	13	1.7
Valvoline	Allfleet Extra	X		30	11	1.3
Mobil	Mobilgard SHC 120	X	X	40	15	1.64
Exxon	XD-3	X		30	8	0.8
Exxon	XD-3 Extra	X		30	8	1
Exxon	XD-3	X		40	8	0.8
Exxon	XD-3 Extra	X		40	8	1
Chevron	Delo 1000 Marine	X		30	12	1.67
Chevron	Delo 1000 Marine	X		40	12	1.67

COASTAL PATROL BOAT
MASTER TRAINING LIST
(MTL)

BILLET	COURSE#	COURSE TITLE	DUR	PT	CM
LTJG/E-9/E-8 CO/OIC (C-101)	PCO/PXO-2	CG Prospective CO/XO/OIC/XPO Afloat PCO Fam Training	12 2	Y Y	G-OCU G-OCU
BM1 XPO (C-102)	PCO/PXO-2 MLE	CG Prospective CO/XO/OIC/XPO Afloat Basic Boarding Officer	12 32	Y Y	G-OCU G-OPL
BM2/QM2 (D101)	K-495-0419 G-KSE-054	Advanced Shipboard Firefighting Team Coordination Training – Cutter Ops	4 3	N N	G-SRF G-WKS
FS2 (S-101)	CG-022	FS Paperwork Management & Administration	19	Y	G-WKH
MKC EPO (E-101)	MK-01A DC-06 MK-XX	Engineering Administration Damage Control & Fire Fighting MTU Diesel Engine*	12 5 5	Y N N	G-SRF G-SRF G-SRF
MK2(E-102)	MK-XX K-495-0419	MTU Diesel Engine* Advanced Shipboard Firefighting	5 4	N N	G-SRF G-SRF
FNMK (E-103)					

*Currently offered by contractor. RTC Yorktown will incorporate into its 1999 curricula.

CPB ELECTRONICS EQUIPMENT SUPPORT FACILITIES

(Homeporting listed here subject to change)

	DIST	Servicing Group/ESD	Existing 82' WPB Homeport	82' WPB Name
87301-BARRACUDA	11	Group Humboldt Bay	Eureka, CA	PT RICHMOND
87302-HAMMERHEAD	1	ESD Cape Cod	Woodshole, MA	PT TURNER
87303-MAKO	5	ESD Cape May	Cape May, NJ	PT FRANKLIN
87304-MARLIN	7	ESD St. Petersburg	Fort Myers, FL	PT STEELE
87305-STINGRAY	8	ESD Mobile	Mobile, AL	PT LEDGE
87306-DORADO	11	Group LA/Long Beach	Crescent City, CA	PT HEYER
87307-OSPREY	13	Group Port Angeles	Port Townsend, WA	PT BENNETT
87308-CHINOOK	1	ESD New Haven	New London, CT	PT FRANCIS
87309-ALBACORE	5	ESD Portsmouth	Little Creek, VA	PT HURON
87310-TARPON	7	ESD Charleston	Tybee Island, GA	
87311-COBIA	8	ESD Mobile	Mobile, AL	
87312-HAWKSBILL	11	Group San Francisco	Monterey, CA	PT HOBART
87313-CORMORANT	7	ESD Miami	Fort Pierce, FL	PT MARTIN
87314-FINBACK	5	ESD Cape May	Cape May, NJ	PT BATAN
87315-AMBERJACK	8	ESD Corpus Christi	Port Isabel, TX	PT NOWELL
87316-KITTIWAKE	14	Group Honolulu	Nawiliwilli, HI	PT EVANS
87317-BLACKFIN	11	Group LA/Long Beach	Santa Barbara, CA	PT CAMDEN
87318-BLUEFIN	7	ESD Miami	Fort Pierce, FL	PT BARNES
87319-YELLOWFIN	7	ESD Charleston	Charleston, SC	
87320-MANTA	8	ESD Galveston	Freeport, TX	
87321-COHO	8	ESD Mobile	Panama City, FL	
87322-KINGFISHER	7	ESD Mayport	Mayport , FL	
87323-SEAHAWK	8	ESD Corpus Christi	Apalachicola, FL	PT JACKSON
87324-STEELHEAD	8	ESD Corpus Christi	Port Aransas, TX	PT COUNTESS
87325-BELUGA	5	ESD Portsmouth	Portsmouth, VA	PT WARDE
87326-BLACKTIP	11	Group LA/Long Beach	Oxnard, CA	PT CARREW
87327-PELICAN	8	ESD New Orleans	Morgan City, LA	PT WINSLOW
87328-RIDLEY	1	ESD Moriches	Montauk, NY	PT WELLS
87329-COCHITO	5	ESD Portsmouth	Little Creek, VA	PT BONITA
87330-MANOWAR	8	ESD Galveston	Galveston, TX	PT SPENCER
87331-MORAY	1	ESD SW Harbor	Jonesport, ME	PT HANNON
87332-RAZORBILL	8	ESD New Orleans	Gulfport, MS	PT ESTERO
87333-ADELIE	13	Group Seattle	Port Angeles, WA	PT DORAN
87334-GANNET	7	ESD Mayport	Cape Canaveral, FL	
87335-NARWHAL	8	ESD Corpus Christi	Corpus Christi, TX	PT GLASS
87336-STURGEON	11	Group LA/Long Beach	Newport Beach, CA	PT STUART
87337-SOCKEYE	8	ESD New Orleans	Grand Isle, LA	PT SAL
87338-IBIS	11	Group San Francisco	Bodega Bay, CA	PT CHICO
87339-POMPANO	5	ESD Cape May	Cape May, NJ	PT HIGHLAND

87340-HALIBUT	8	ESD New Orleans	Gulfport, MS	PT MONROE
87341-BONITO	11	Group LA/Long Beach	Marina Del Rey, CA	PT BRIDGE
87342-SHRIKE	8	ESD Galveston	Pensacola, FL	PT LOBOS
87343-TERN	11	Group San Francisco	San Francisco, CA	PT BROWER
87344-HERON	8	ESD Mobile	Sabine, TX	PT BAKER
87345-WAHOO	5	ESD Cape May	Cape May, NJ	
87346-FLYINGFISH	1	ESD Cape Cod	Newport, RI	
87347-HADDOCK	11	Group San Diego	San Diego, CA	
87348-BRANT	11	Group San Francisco	Half Moon Bay, CA	
87349-SHEARWATER	13	Group Port Angeles	Port Angeles, WA	
87350-PETREL	5	ESD Portsmouth	Little Creek, VA	
ALL CUTTERS		SMEF-C2CEN for AN/SPS-73 Radar	Portsmouth, VA	